Going Somewhere

A. FREDERICK COLLINS

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GOING SOMEWHERE

Frontispiece

OCEAN LINERS DEPART AND ARRIVE ON SCHEDULE LIKE RAILROAD TRAINS.

Going Somewhere

How To Travel By Land And Sea

By

A. FREDERICK COLLINS

Author of "The Magic of Science," Etc.

ILLUSTRATED FOR YOUNG PEOPLE

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To
Those Globe-Trotting Girls,
Hannah and Winifred Irwin,
Rupert Terrace, Ascot,
Brisbane, Australia.

253004

A WORD TO THE BOY AND GIRL

TRAVEL is the great eye-opener, brain-stimulator and mind-awakener.

To always live in one place, whether it is in the backwoods of civilization or in a great city of culture, and never to go anywhere is to live in the rut of a one-dimensional being, and that is only living a third of your fulness of life.

During your youth you spend at least six years in school, learning the three *R's* and a little about geography; next you spend three more years in high school, if you've had a chance; after that you go to college for three or four years to get a *B.A.* or a *B.S.* degree, and then you take another two or three years' post-graduate course if you want to become a lawyer, minister, doctor, chief.

And these long years of training your mind how to shoot are needful (the way teaching is done at present) if you hope to ring the bell of success, or even to hit anywhere near the bull's-eye of it, but unless you spend some of your time and money going somewhere you will miss that part of your education which counts more points than any other two subjects I know of, and, besides, it's very much more pleasant, too.

So, what you ought to do is to travel, anywhere, everywhere, ’round the world if you can, and to the four quarters of the globe. Now, there are several kinds of travellers, as, for example, the commercial, or garden, variety; then there are those grown old who seek new bodies at the watering places of youth; again, there are others who are on pleasure bent, and, finally, a few who want a closer acquaintance with nature, their fellow-men and their works.

Be all of the above kinds rolled into one; see everything, hear everything and understand everything about it and about, whether it is an idiom of some foreign tongue, the cause of the periodic eruption of the geysers, the working of a locomotive, or the navigation of a steamship. At the same time do business if needs be, take a mud-bath if you think it will help you, observe art for art’s sake, but whatever you do, get all that you can out of travel, for then you are really living!

To be a real traveller, though, you should begin to train yourself right now, and the way to do it is not to let anything about you, however small, pass unnoticed, however large be beyond you, and however commonplace be of too little consequence for you to observe and to analyze. A good way to start is to learn all about your own locality first, for this will serve as a yardstick with which to measure the other places by that you visit. And then study science a little, read history a lot and, finally, learn to speak the French language, and you will have everything you need to

See America First and to *Do Europe After*—that is, all but one.

This last necessary ingredient is the *wherewithal* to pay for your transportation and to cover your other travelling expenses. I am sorry I cannot give you any useful advice on how to corral the elusive dollar, but I am a builder of books rather than an accumulator of trash, and so this part of it is quite out of my line. But I am sure if you want to travel you will be able to manage the finances without any great amount of trouble. And now, good-bye, a pleasant journey and a safe return.

A. FREDERICK COLLINS.

2, Whitehall Court,
London, England.

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PART I

SEE AMERICA FIRST

I

GOING SOMEWHERE

NEARLY every boy and girl has taken a ride on a train or made a trip on a boat, if it was only to go to a circus in the next town or to a picnic up the river.

FIG. 1.—GOING SOMEWHERE

But what I mean by *going somewhere* (see Fig. 1) is to board a fine, through train and go half, or all the way, across the continent, or to sail on a fast, big steamer from some Atlantic port to Bermuda, or to Cuba, or, what is still better, to Europe; a yet greater adventure is to sail from some Pacific port to the Hawaiian Islands, or to Japan, or some other country of the Orient.

If you have never made a long trip by either rail or water there are a lot of points you ought to know about before you go, for knowing them will add mightily to your peace of mind and bodily comfort, as well as to help you to understand and, therefore, to appreciate things, and, quite often, save you money—all items that are not to be sneezed at.

Having decided to make a trip, which we will suppose for the present to be by rail, for you should *See America First,* there is the question of what to take along in the way of clothing and baggage—and everything will be in the way, except when you want to wear or use it.

Whether you are a boy or a girl, your selection will depend on several factors, and chief among these are (1) the length of time you are to be gone; (2) the season of the year when you go, or, what amounts to the same thing, if you are going from a cold to a warm climate, or the other way about, and (3) the status of your finances, or, in plain unadulterated English, the amount of money you have to spend.

Now, just to get started, let's suppose that you live somewhere in the East, and that you are going out to Manitou, Colorado, or through to the Pacific Coast, and let us further assume it is summer and that this is a pleasure trip earned by good work at school or college, and, finally, that you expect to be gone a month or two.

What to Wear.—For the Boy.—First of all, the suit you are going to travel in should not be too light in weight or in colour, or the dirt and stains incident to travel will quickly show on it. A salt-and-pepper, or checked, or dark blue serge suit are all good patterns for this purpose. One or two suits will be about all of the clothes you need, unless you are going to stop at first-class hotels, and then you should have an informal dress suit, that is, one with a tuxedo coat, for evening wear, as shown in Fig. 2.

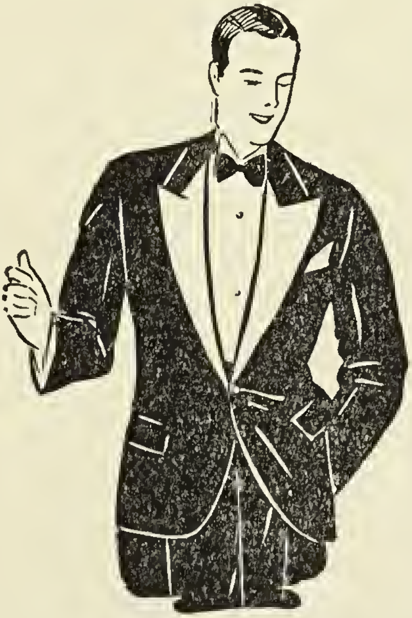


Fig. 2.—For Informal Evening Wear

Wear a pair of calf shoes to travel in, and not patent leather ones, as the latter will scruff easily and look shabby in no time. Take along a pair of stout shoes for walking and playing out-of-door games, and don't forget a pair of patent leather pumps to wear with your tuxedo. A soft felt hat, of the *fedora* variety is better than a derby for ordinary wear, and you should also have a cap. Get one to match your suit if you can, or if this is not possible, then choose the nearest approach to it that you can find. Lastly, a pair of buckskin or *suede* (pronounced *swade,* not *sweed*) gloves that fit your hands neatly will be found a very useful accessory.

You should also have a *mackintosh* or *cravenette;* have it good and long, and these come in tan, grey and brown, striped or mixed. This coat will serve the dual purpose of keeping you from getting wet when it rains and warm if it gets cold. Ordinarily it looks like a light overcoat, for it is made of cloth, but it is treated with chemicals to make it waterproof.

Finally, you will need a couple of suits of pajamas, a dressing-gown, and these should be of very light weight material, and a pair of Pullman slippers, which latter are light and so made that you can fold them up and put them in a case. Now, all of the above outfit, except your rain-coat, but including some shirts, collars, underwear, socks and handkerchiefs, can be packed in a suitcase and a bag, and you will not, therefore, need a trunk. To travel *light* in this way is, indeed, a pleasure, for it often saves worry, economizes time and cuts off a little of the expense.

I have written the above on the assumption that you are not overburdened with the coin of the realm, but, of course, if you are a rich man's son, or have inherited a fortune from some wealthy relative, you should have a much more elaborate wardrobe, and this should include a walking suit, a yachting suit, a golfing suit, a tennis suit, a riding suit, a morning suit for afternoon wear, a full dress suit for formal occasions, and, to add to the gaiety of your travels, you can have a lawsuit if you want one. Having a complete wardrobe, you will need one or more trunks, and these will be described presently.

For the Girl.—A nice suit to travel in is a three-piece sport dress (see *A* in Fig. 3) of tan or blue tweed, as this material does not wrinkle, and wear a tan felt hat, tan hose and oxfords, and sand gloves and purse. You should take a travel coat, as shown at *B,* with you, and one made of plain homespun material in tailored style will be very serviceable, as it can also be worn with afternoon dresses. Get a transparent (glossine) raincoat for rainy days, with a hat of the same material, and a pair of rubbers, and, having these, an umbrella will be unnecessary.

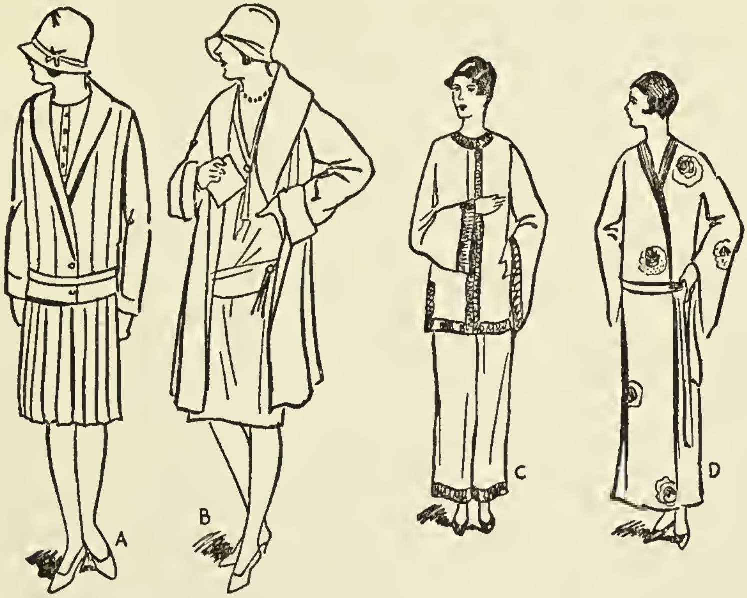


Fig. 3.—Your Clothes for Train Wear

For morning wear, a blue or grey sweater costume with a beret of blue or grey, and tan or black oxfords is *chic* enough. For the afternoon, you can wear a plaid skirt with velvet jacket to match in blue or tan, but do not have it too dressy; black or brown pumps with sand-coloured hose and sand gloves. You will be sure to be invited to tea, and a dressy frock of green-crêpe-satin with a smart shoulder bow, green velvet hat, sand hose and black pumps will make you feel perfectly at ease wherever you may be.

After six o'clock a dainty coral party dress, but one that is not too elaborate, with a pretty round neck line and sleeveless, with black hose and patent leather pumps will make you radiantly charming. A white dinner dress, daintily embroidered with rhinestones, and silver hose and slippers is at once simple and beautiful.

Finally, for an evening gown a pale blue transparent velvet, with a huge silver flower at your waist-line, and silver hose and slippers completes an inexpensive ensemble that you can go anywhere with, provided you do not stay too long. A black transparent velvet gown with a rhinestone buckle, gun-metal chiffon stockings and black satin pumps with rhinestone buckles makes a stunning ensemble. While transparent velvet will wrinkle when it is folded up and carried in a suitcase a little steaming will fix it all right again. A chiffon gown will not wrinkle easily, and you can make it look as good as new by shaking it out when you remove it from your case.

You will, of course, need a couple of suits of pajamas, and these can be made of figured or particoloured silk, as shown at *C*. Also get a Pullman robe (see *D*) of black satin embroidered in bright colours, and have large pockets in it so that you can slip your toilet articles in them when on your way from and to your berth in the car and the dressing-room. Finally, get a pair of black, soft slippers, or Pullman slippers, as these can be folded and take up very little space.

All of the above outfit, together with your other things, can be packed in a large suitcase or a couple of small ones. Of course, if you are going to remain in one place for a considerable time and intend to enter into all of the diversions and sports of the season, you will need a more elaborate wardrobe, and this means that you must have a trunk or two.

What to Carry with You.—Whether you are a boy or a girl, there are a few things you ought to carry with you all of the time, and these are (1) a fountain pen and a pencil, (2) a note-book—either a small loose-leaf book or a memorandum pad, called a *Robinson Reminder,* and either kind can be had at any good stationery store.

(3) If a boy, you will need a small wallet with pockets in it for bills, cards, tickets and stamps, and this is usually fitted with a calendar and an identification card, which do not fail to fill in. A snap purse is a good thing to keep your loose change in. If a girl, your purse will serve all the above purposes and others too numerous to mention.

(4) You should not carry any considerable amount of ready money, but only enough to carry you to your destination and, of course, with a fair safety margin for emergencies. The safest way is to carry either a bank draft, a letter of credit or travellers' checks, and all of these are explained in Chapter I, Part II.

(5) An essential for travelling is a watch that will keep good time, but do not carry an expensive one and do not wear or carry valuable jewellery with you. A

wrist watch is by all odds the most convenient, though by no means the most accurate kind.

Your Travelling-bag.—The next thing is your travelling-bag and the articles you want to carry in it. A black bag is better than a tan one because it doesn't show every little spot that gets on it, and while it looks more dressy, it is in better taste, too. It is a mistake to get too small a bag, for you will not only want plenty of room to carry your pajamas, Pullman robe and slippers in, but also your toilet articles, books, papers, your camera and other things.

An eighteen- or twenty-inch bag, certainly not larger, is about the right size and heavy enough to carry when you have everything in it; larger sizes are, however, obtainable. Have the store where you buy it stamp your initials on one side, and it is a good scheme to print or write your name in ink on the lining, which should be of leather.

These bags are made in all kinds of leathers, grained, sole, walrus, cowhide and alligator, and do not buy an imitation leather one if you can possibly afford the genuine article. About the cheapest decent-looking bag that you can buy costs in the neighbourhood of seven dollars, and from this the prices run on up to forty or fifty dollars. Get as good a bag as you can, for by your baggage are ye known.

The toilet articles you will need include a mirror, hair-, clothes-, nail- and tooth-brushes, comb, and a few manicure implements, and a tube of tooth-paste. A fitted bag or case, that is, one in which all of the above and many other articles are fitted into receptacles in it, can be bought, but while this is often a convenience many of the things are unnecessary, and for a pleasure trip it is a great mistake to carry along anything you do not really need, the single exception being a camera.

Whatever your mission and wherever you go, you should by all means take along a camera. One that makes a 3¼ by 4¼ picture is the size I like the best, for it is about the smallest camera that will make a picture large enough to show the details, and it is just the size of a lantern-slide used in a regular magic lantern or stereopticon. When, then, you return from your trip you can have lantern-slides made by direct contact from your films for thirty or forty cents apiece, and when these are projected on a screen everything you have *kodaked* will stand out true to life and twice as natural. Doubtless you know all about having enlargements made of the pictures you have taken from the films, but if by any chance you do not, any dealer in photographic materials will enlighten you.

A No. 3 Brownie box camera, which makes a 3¼ by 4¼-inch picture, is a good one to buy if your funds are limited. A folding No. 3 Brownie camera, though it costs a little more than a box camera, will serve you much better, for you can fold it up and slip it into your pocket. But the best of them all is the No. 3 autographic kodak, for with it you can write down who or what is taken right on the film at the time that you make the exposure.

About a Suitcase.—If you are travelling *light,* a suitcase is a necessity, and it is often a convenience, even when you have a trunk, though, under the latter condition, you can frequently dispense with it. As with a bag, a black case is preferable to a tan one, and, if possible, have your bag and case made of the same kind of leather. Suitcases (see Fig. 4) come in all styles, sizes and prices, but unless you are going to use it simply as an overnight case it should not be too small; a 24-inch case is large enough for a girl, while a 26-inch one is a good size for a boy.

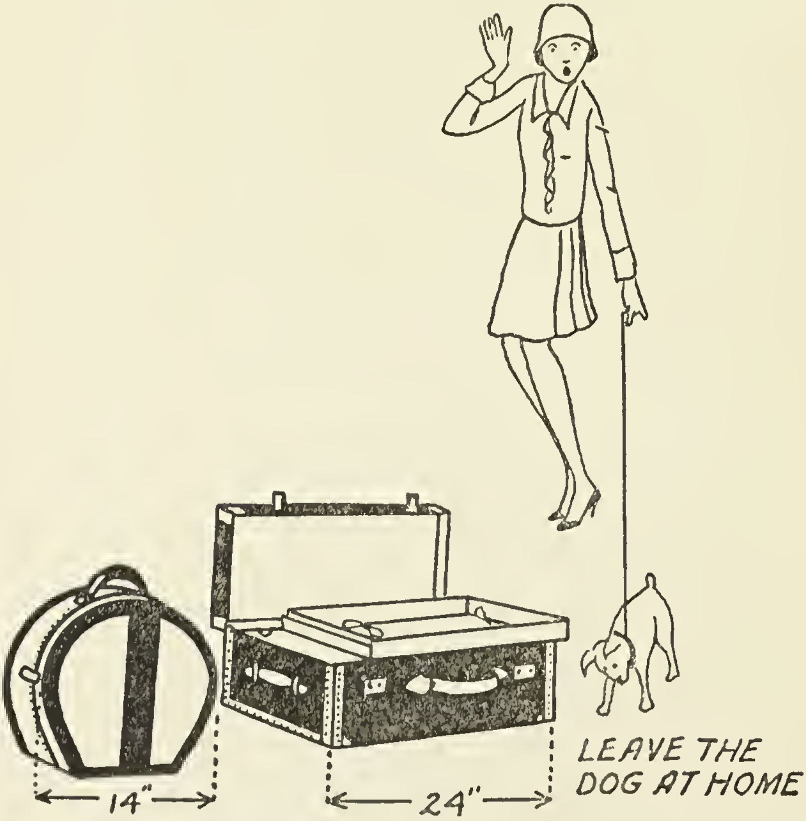


Fig. 4.—Your Suitcase and Hat Box

Now for Your Trunk.—The proper kind of a trunk for you to get is a *wardrobe trunk,* and this looks just about like a common trunk when it is closed, but when standing on end and opened it loses all resemblance to its ancestor, as Fig. 5 shows, and it becomes a miniature wardrobe and dresser rolled, or rather hinged, into one.

The wardrobe half is fitted with either a swinging bracket or a trolley, and this has about a dozen hangers on which to hang your suits or dresses, even as you do in your wardrobe or closet at home. A couple of thin strips of wood hold your clothes in place, no matter what position the trunk is in, with the result that they do not need to be pressed before you wear them on

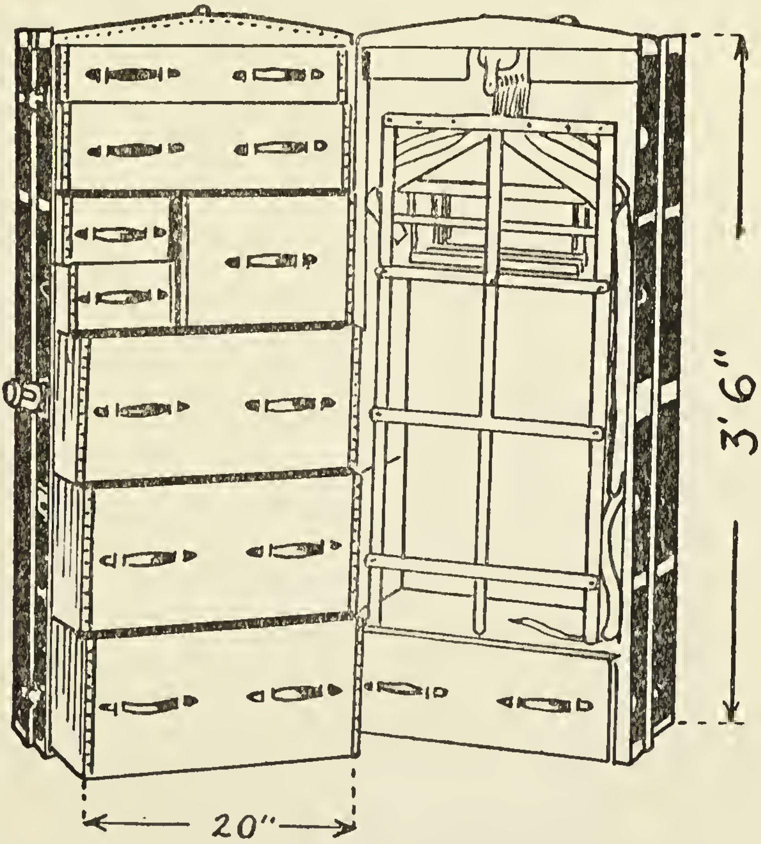


Fig. 5.—Your Wardrobe Trunk

reaching your destination, and this is a great satisfaction, convenience and saving.

The other and left-hand side of the trunk has four or five drawers in it, and these can be used for various other things, just as are the drawers of a dresser at home. A medium-size trunk is one that stands about thirty-six inches high when on end, and weighs about seventy-five or eighty pounds when empty; it should not weigh more than one hundred and fifty pounds when packed, or else you will have to pay excess baggage on it, and this is another waste of good money. In buying a trunk, do not be misled by such *gyp* selling names as *Neverbreak,* etc., as these are misnomers and of poor quality. The best and, it follows, the more expensive trunks are the *Hartman,* etc., and these range in price from about forty dollars to one hundred and fifty dollars.

How to Pack Your Clothes.—While this last part of getting ready to go somewhere will be useful to both the boy and the girl, I have written it chiefly for the former, as the latter know just naturally how to take care of their things and to pack them to the best advantage. If you are taking a wardrobe trunk with you, there is very little packing to do, but when travelling *light,* that is, with only a suitcase, you must know how to fold each piece the right way so that (1) you can get the most into the smallest space, and (2) have them as fresh looking as possible when you take them out.

To fold a pair of trousers for packing, hold them by the cuffs so that the creases will be even in the front and back, and also see to it that the fly is folded in smooth. Fold the legs over until the cuffs nearly touch the waist-band and then fold them over once again. You can now pack them in the case, and when you take them out they will be pressed rather than wrinkled.

A coat is nearly as easy to pack if you go about it the right way. First turn it inside out, then fold it over lengthwise once, and have the collar even and smooth. Push one of the inside shoulders of one sleeve into the shoulder of the other, and if your suitcase is large enough lay it flat in it, but if it is not you will have to fold it flat again, this time turning the bottom up to the collar.

Finally, here are three little schemes that will help greatly to keep your suit from getting creased or wrinkled when it is packed, and these are to (1) stuff the shoulders and upper part of the sleeves with tissue-paper; (2) fasten down the straps of the suit-case tight enough to prevent the pieces of the suit from slipping around, and (3) take out all of the pieces and hang them up at the earliest possible moment after you arrive at your destination.

II

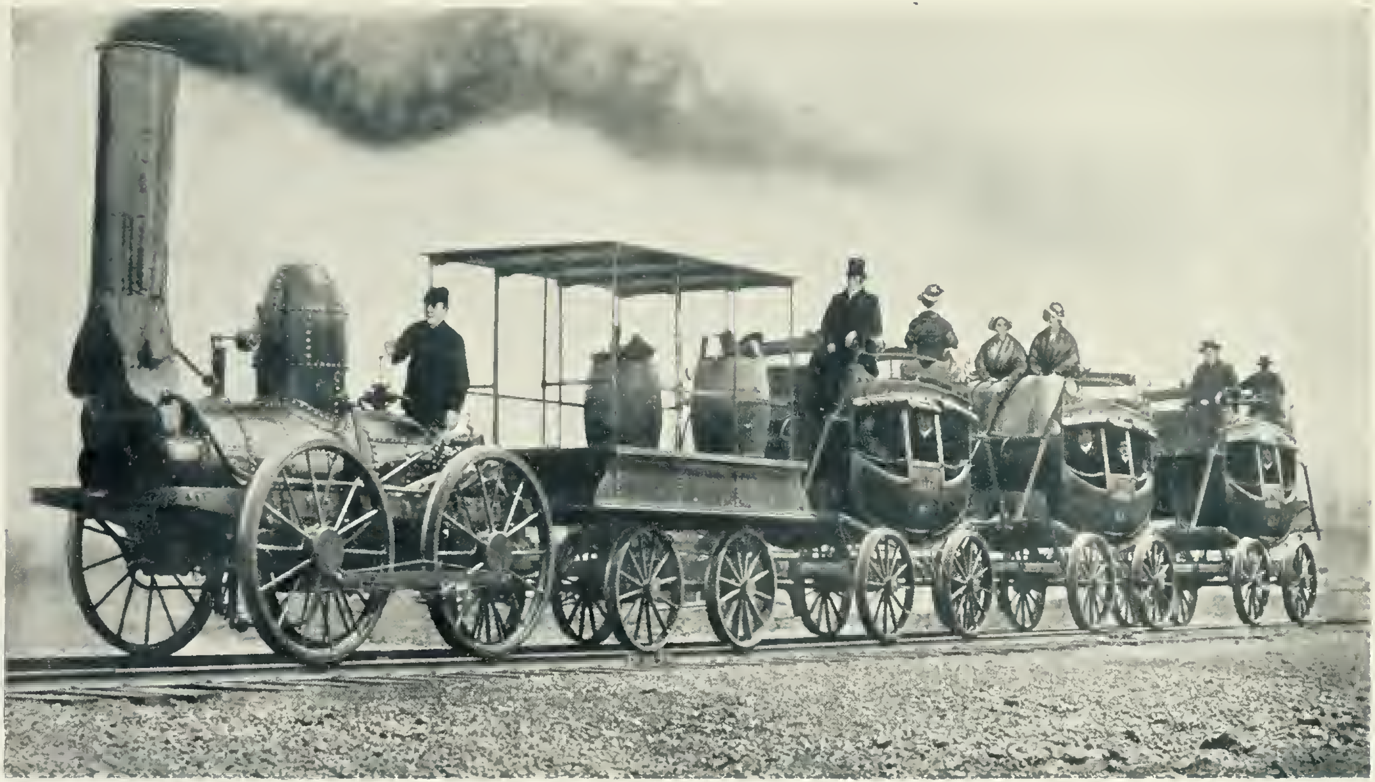
BUYING YOUR TICKET

USUALLY the embryo traveller has his mind made up as to where he wants to go long before he ever thinks of transportation. But there is something more to the transaction than simply to go into a ticket office and say, " Please give me a ticket to Glenwood Springs, to San Diego, or to little old New York," for there are numerous different routes by which you can travel forth and back and across the continent; yes, indeed there are.

Mapping Out Your Route.—If you are bent on having a good time and want to see all that there is to see you should patronize those lines that have the best service and take those trains that run through the parts of the country where the sights abound.

Now, some travellers like to see the cities while others are interested more in the scenery and natural wonders, and no doubt you have some ideas yourself about what you want to see. But, anyway, just as soon as you feel the wanderlust working in your system, send for the folders of the different railways, and these will tell you in particular all about the points of interest that can be reached on and from their lines.

Nearly all railways issue booklets, which they will send to you free of charge, or charge a few cents for, that tell in glowing terms and show in works of art the places you have dreamed of. These booklets are a liberal education in themselves, and all you have to do



WHEN TRAVEL WAS YOUNG.

The De Witt Clinton locomotive with its train. It was the first train operated in New York State and this was in 1831.

to get them is to write to the advertising departments of the various railway companies or to the different travel bureaus.

The Six Wonders of America.—As a matter of fact, there are only six great natural wonders in America,

FIG. 6.—MAPPING OUT YOUR ROUTE

if we except the Great Lakes and the mountains, and three of these are east and three are west of the Mississippi River. The three eastern ones are (1) Mammoth Cave, in Kentucky, (2) Niagara Falls, and (3) the Hudson River, both of which latter are in New York. The three that are west of it are (4) Yellowstone Park, in Wyoming, (5) the Yosemite (pronounced *Yo-sem'-i-te*) Valley, in California, and (6) the Grand Canyon of the Colorado, in Arizona.

But there are dozens of natural wonders on a smaller scale scattered all over the country, and any one of which is worth going a thousand miles to see. Now, wherever you live, if you want to include these wonders in your *itinerary,* that is, your plan of travel, you must map out your route (see Fig. 6), so that you can take in part of them when going and part when returning, and all of which you will find highly interesting, educational and mighty pleasant.

To the Coast and Back.—Suppose you are going to buy a round trip ticket from New York to San Francisco, a good way to make the journey so that you will not miss any of the big scenic features is to leave on the *New York Central,* which runs alongside of the Hudson River, and get a stop-over at Niagara Falls. After you have seen it, go on by the same line (it used to be called the *Lake Shore and Michigan Southern*) to Chicago, where you will be transferred by a *Parmelee Transfer Company* motor-bus from the La Salle Street Station to the Union Station.

There you take the *Olympian* train of the *Northern Pacific*[1] to Gardiner, which is one of the three gateways to Yellowstone Park. After you have gone through it, which you can do in any one of several ways, namely, on foot, on a bicycle, on a horse, in a motor-car or in a motor-bus, you then return to Gardiner and go on to Seattle over the same line. From Seattle you can visit Tacoma and other Puget Sound cities *via* the *Southern Pacific,* and this line also carries you on down to Portland, Oregon, thence past Mount Shasta and on to San Francisco, or just *Frisco* for short, as it is sometimes familiarly abbreviated.

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[1] This road runs from the Pacific Coast to St. Paul, but its through trains run into Chicago over the Chicago, Burlington and Quincy.

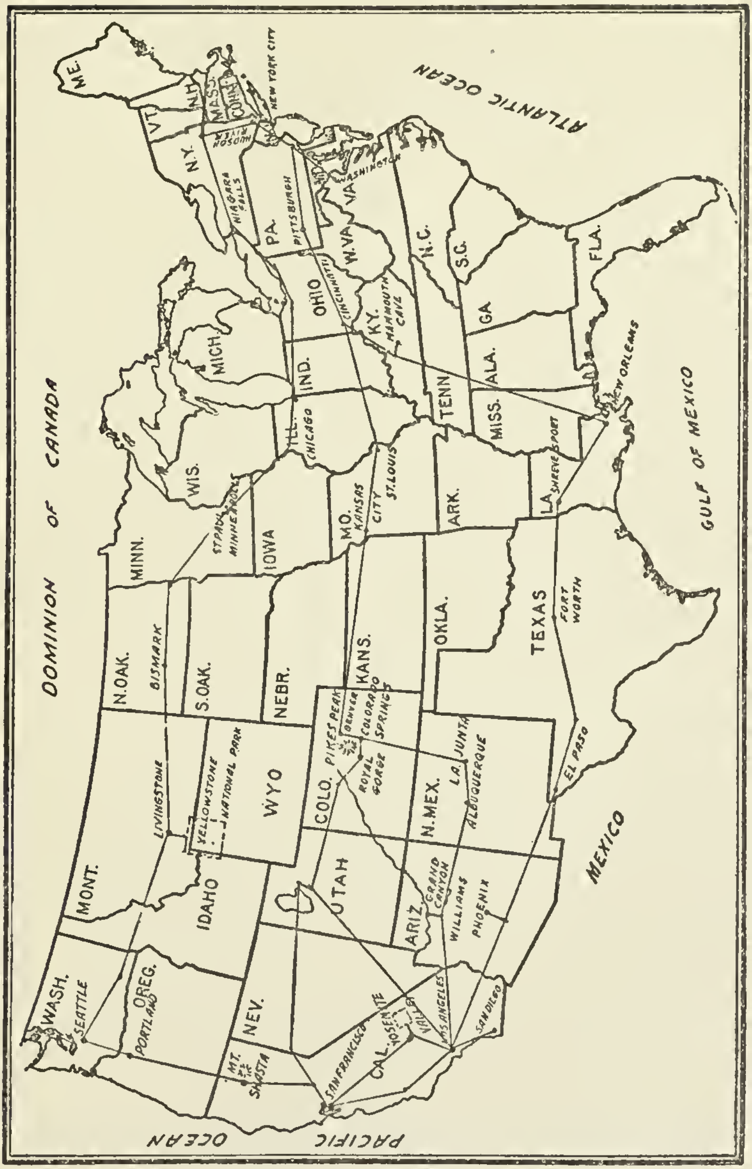

Fig. 7.—A Round Trip Trans-Continental Tour

From San Francisco you have the choice of two routes to Los Angeles, as the map, Fig. 7, clearly shows, and one of these is the coast line and along which the scenery is very fine and unusual, and the other runs through the San Joaquin[2] Valley with the Cascade Mountains on the left. This is the route you must take if you intend to stop off at the Yosemite Valley. The junction where you change cars is Merced, and from there a little branch line takes you to El Portal, which is the gateway of the Yosemite. Stay in the valley as long as you like, and then go on to Los Angeles.

In leaving the City of the Angels you nave the choice of one of several routes for your return trip. If you would rather see the home of the Mormons than the Grand Canyon, you can can return to San Francisco by way of the Coast Line and then go on to Salt Lake City over the Central Pacific, or you can take the shorter and less interesting Los Angeles and Salt Lake Railway line direct to Salt Lake City.

But if you have a burning desire to see the Grand Canyon—and since you are so near it, it would be a shame to miss it—then take the Santa Fé from Los Angeles to Williams, Arizona, where you change cars for Grand Canyon, which is the gateway of it. To visit romantic New Orleans, you will have to go *via* the *Southern Pacific,* but, of course, in so doing you must cut out Salt Lake City, Denver, and Colorado Springs, and also the Royal Gorge, Manitou and Pike's Peak.

It is easy to reach Mammoth Cave by the Louisville and Nashville road if you are going north from New Orleans to Cincinnati. In this case you stop off at

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[2] Pronounced *Wa-keen'*.

Glasgow Junction, Kentucky, and take a primitive railway line to Mammoth Cave and Colossal Cave, the latter having been discovered within comparatively recent years. From Cincinnati you can continue on your way east by the Baltimore and Ohio, or whatever eastern line you may care to travel over, and so reach Washington or Philadelphia and thence back to your home town.

Since Niagara Falls, Yellowstone Park, Grand Canyon and Mammoth Cave are all short distances from the main railroad lines, when you buy your through ticket be sure to say that you want it to read not only to Buffalo, but to Niagara Falls, not only to Livingstone, but to Gardiner, not only to Williams, but to El Tovar,[3] and not only to Glasgow Junction, but to Mammoth Cave and return.

If you do not insist on having your ticket read to these places instead of to the junctions nearest to them, you will find that you will not only have to pay the additional fares but, what matters more, you will have to give up your berth in the Pullman and ride in the day coaches to these termini instead of riding in a Pullman like a thoroughbred passenger. It is little annoyances of this kind that go a long way toward taking the joy out of your joyousness when travelling, and it is just what I am trying to put you *wise to* before you start.

Now, just bear in mind that (1) the *New York Central* runs sleeping-cars direct to Niagara Falls; (2) to have your railroad and Pullman tickets read to Gardiner when you go to Yellowstone Park; (3) an extra fare is charged from Merced to El Portal, the gateway to the Yosemite Valley, and you not only have to change cars but the train is made up of a couple of day coaches only; (4) the *Santa Fé Railway* runs through sleepers from Williams to El Tovar, and (5) finally, no through cars are run to Mammoth Cave, but you can have your railroad ticket read to there instead of to Glasgow Junction.

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[3] El Tovar is the chief hotel right on the rim of the Canyon.

How to Buy Your Tickets.—Your Railroad Ticket. —By the term *railroad ticket* is meant the ticket that entitles you to ride in a day-coach for a given distance over a certain railroad. Before you go to the ticket office to buy your railroad ticket, get a good map of the United States, look it over carefully and write down just what roads you want to travel over and note down all of the stop-overs you want to make.

Now, when you go to buy your ticket, and it is a good plan if you are making a journey of considerable length to do this several days before the time when you intend to leave if you are going to get a Pullman ticket, hand the ticket agent or seller your itinerary, and this will make the buying of it an easy matter for both you and him. Nearly all of the mistakes that are made in railroad tickets are due to the carelessness of the prospective traveller, and you can avoid most of them by doing a little thinking for yourself.

A round-trip coast-to-coast railroad ticket is about six feet long, and the reason these tickets are made in lengths approximating a three-reel film is because the conductor of each division of each road must have a record of your ride to turn in to the *Auditor's Office;* in this way each road you travel over is able to get its pro rata of the amount you paid in, and this is the easiest and the surest way for them to do it.

Your Pullman Ticket.—When you buy your railroad ticket it will have the term *First Class* printed on it, but this is a misnomer, for it entitles you to ride in the day-coach only, and to really travel first-class you must ride in a Pullman car. A week or ten days before the time you have set to start on your trip, if possible, and certainly not less than three or four days before, write, telephone, or, better, go in person to the ticket office—nearly all railroads have up-town ticket offices in the larger cities—and ask the Pullman ticket seller to reserve a *berth*—that is a combined seat and bed—in the sleeping-car for you.

Also request him to kindly *wire* ahead for such *reservations* in other sleepers on other roads which you may need to insure your having a berth all the way to your destination. Ask him to give you a *lower berth* and one near the middle of the car. The reason you want a lower berth is because you can undress and dress so much easier than if you have an upper berth.

If you have an *upper,* as it is called for short, you must needs climb a step-ladder, which the porter, if you can find him, will get for you, in order to reach it. Once in the *upper,* you are obliged to *skin-the-cat* and then do a contortion act to take off and put on your clothes. There is only one thing to be said in favour of an upper berth, and that is, it is a trifle cheaper than a lower one, but it is by no stretch of the imagination worth the difference in the price.

The reason you should try to get a berth in the middle of the car is because the vibration and shocks it is subjected to are absorbed, or equalized, to a greater extent at this point than at or near the ends. In the early days of wooden car construction passengers always wanted to sit and sleep in the middle of the car, as this was the safest part of it in the event of a collision, but with the new all-steel cars, air brakes and block signal systems there is little if any danger from collisions; in fact, you are safer riding in a steel car at sixty miles an hour than you are when walking on Broadway where they are building sky-scrapers over your head and digging subways under your feet.

Drawing-rooms and Compartments.—Every Pullman sleeper has a little room, called a *drawing-room,* at each end of the car that is partitioned off entirely from the berths and fitted with a door that locks, and this insures as much privacy as if you were in your own room at home. Some of the *extra-fare* trains have *compartment cars,* that is, a whole car is divided up into small rooms, and while they are not as large as a drawing-room they also have private toilets, and give you the privacy and the safety you want. Of course, there is a considerable extra charge for a drawing-room or a compartment, but if you can afford it, it is easily worth the money.

Time was, and not so very long ago, when one could not buy a through Pullman ticket from coast to coast, and this caused no end of trouble to the traveller at Chicago, St. Louis, or New Orleans, for at one of these inter-cities he had to change from one sleeping-car to another.

I had an experience of this kind while on my way to the Alaska-Yukon-Pacific Exposition in Seattle, in 1909. When I arrived at the Union Station in Chicago, I found that the *Yellowstone Limited* was scheduled to leave in twenty minutes and also that there were a hundred others, or some less multiple of this number, in the same fix as myself, and all of us crowded round the Pullman window trying to get our reservations. The ticket seller took things very calmly and by the time I got his ear he told me with all the *sang-froid* of a wooden Indian that there was nothing left but *uppers*. Fortunately, this untoward feature has been done away with, and you can now buy a through Pullman ticket and stay in the same car from coast to coast.[4]

Validating Your Ticket.—When you arrive at the end of your outward bound journey you take your railroad ticket to a special office of the railroad company called a *Validating Office*, and it is stamped for you while you wait. This is done so that you cannot give or sell your ticket to someone else, should you like New York or Los Angeles so well that you never want to go back again to St. Joe or Kansas City, or wherever you happen to live.

Taking Care of Your Baggage.—Armed with your railroad and Pullman tickets, your next move is to get your baggage to the station, and be sure to hie you hitherward in good time. If you are travelling *light*, that is, with only a bag and suitcase, this is very easily done, but if you have a trunk there is a little more to it. In a small town or city you can get your trunk hauled to the station for twenty-five or fifty cents, but in a large city it will cost you two or three dollars if you get an expressman who has to make a special trip.

But in every large city you will find a local express company with an office at the station, and this has motor-trucks which make regular trips over certain routes. By having a company of this kind get your trunk the *day before* you leave you can have it hauled for about a third as much as a special trip will cost you. Whichever way you do it, don't fail to get either a *receipt* or a *claim check* for it. A claim check is just like a baggage check in that it consists of one of a pair of checks which are numbered alike. The check is put on your trunk and you keep the duplicate or claim check until you want to re-check it at the station.

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[4] *This* is on special trains only.

A still better way to get your baggage to the station, and one that will cost you very little more than by express, is to order a taxicab and have the driver put your trunk on the front of it and your luggage inside of it and after which you follow. Having everything with you, there will be no possible chance of a hitch and you can depend on your baggage and self being at the station at the same time and in time.

When you reach the station, or depot, hand your claim check, if you have sent your trunk on by express, to the baggage man and he will check it to its destination and give you another claim check for it. If you go by taxi you will find, if you live in one of the large cities, a porter, or *red-cap,* as he is often called in the vernacular, because he usually wears a red cap, waiting to open the door for you, to take charge of your luggage and to attend to the checking of your trunk for you, and this makes the preliminaries of travelling absolutely painless. If you wish, you can get a *special delivery baggage check,* for which a small extra charge is made, when you check your trunk, and it will then be delivered right to your home, hotel, or wherever you want it to go, when you reach your destination. Personally, I prefer taking a taxi and having my trunk always under my eye.

Baggage Regulations.—Nearly all railroad companies have fixed one hundred and fifty pounds of personal baggage as the maximum amount that they will carry free on one adult ticket, and it will save you a deal of trouble to have your trunk come within this specified weight. Always write down the number of your claim check in your note-book, as this will help you to identify the former in case you lose the latter. And you should also, without fail, mark down the numbers of your railroad and Pullman tickets in your book for the same purpose.

Fig. 8.—A Red Cap Attendant Will Help You

Catching Your Train.—It is a good scheme to get to the station at least fifteen minutes before your train leaves, so that you will have plenty of time to check your baggage and yet not have to wait too long for your train to pull out. A good traveller is one, according to my vocabulary of experience, who never hangs round waiting for his train and yet who never has to run at breakneck speed to catch it.

The Red-Caps, or Station Porters.—At every large railroad station you will always find colored porters with blue or grey suits, brass buttons, and usually wearing *red caps,* so that they can be instantly recognized (see Fig. 8), and these are constantly moving about ready to help you in any way they can.

If you walk into the station carrying your luggage, these *red-caps* will not be likely to pay much attention to you, unless you give them the *high-sign* that you crave assistance. But if you come in a taxi, one of them will be right there to open the door for you and to take your bag and suitcase, so that nothing may impede your movements while you are paying the fare. Then he will show you the way to the baggage room, or, still better, he will, if you wish him to, perform the menial task of checking your trunk for you. Finally, he will carry your luggage to the train, take it into the right car and deposit it at the right seat, and all you have to do is to follow on. Certainly the service is worth the ten-cent or quarter tip which you give him. Yes, the *red-cap* is a great invention, for he *knows the ropes.*

The Personally Conducted Tour.—A certain class of travellers, now popularly called *tourists,* like the *personally conducted tour* idea. If you want to make a trip somewhere and don't want to be bothered with anything, and you like to meet people and you are good-natured, you can qualify as a member for one of these tours and enjoy it.

The one big advantage of travelling this way is that the conductor in charge of the tour attends to all of the details and knows all about everything, or at any rate he is supposed to know, and you can learn more from him and your fellow-travellers than you can by going alone. Try a personally conducted tour sometime just for the fun of the thing, and it's dollars to doughnuts that it will be an adventure you will like.

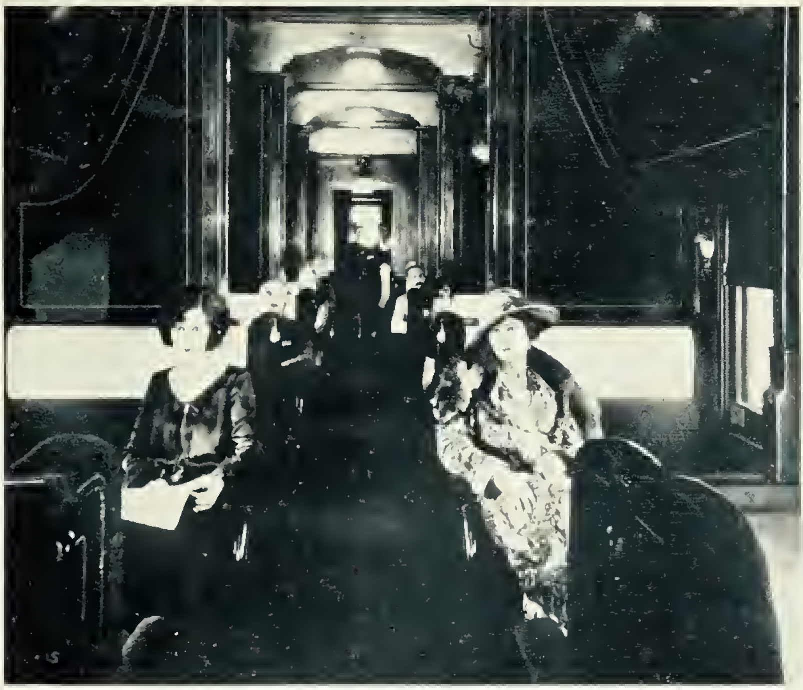
III

ABOARD THE LIMITED

IF you have never sat on a back fence and watched an express train go by, you have missed one of the most thrilling joys of childhood, but if you have never sat on the rear platform of an *observation car* and looked at the receding scenery while the train was clicking off sixty or seventy miles an hour, well, according to my way of thinking, you have missed half of your young life.

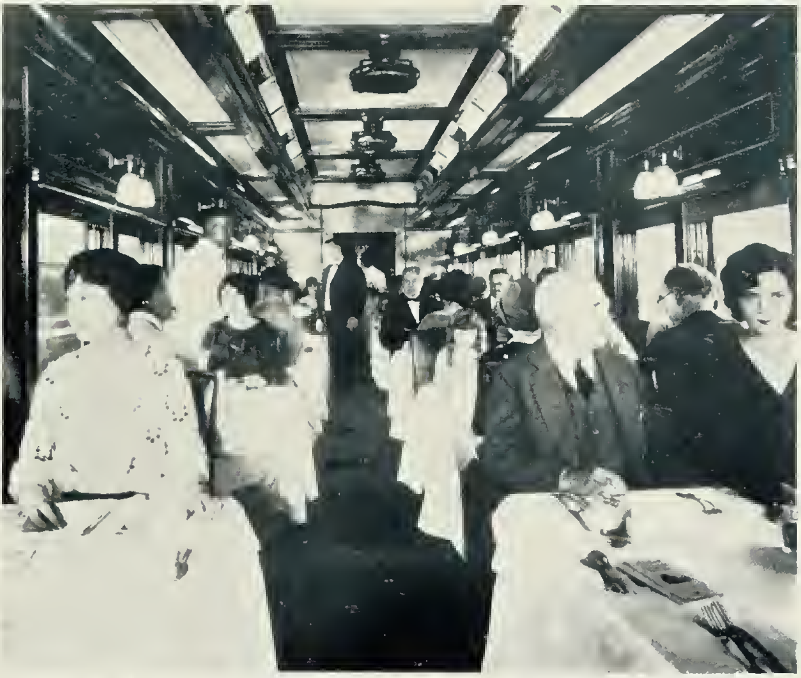
All Aboard!—As you reach the train you don't need to show your tickets to the Pullman porter, but just say to the first one you come to, "Car 11," or whatever the number of the sleeper is that is marked on your ticket, and Jasper will reply by saying, "This am it," or "Two cars ahead," as the case may be. Each sleeping-car has its number printed on a big card, and this you will see in the first window of each car as you come to them. If you have a red-cap porter with you he will know, or he ought to know, exactly where your car is when you give him the number of it.

When he locates your seat and deposits your coat, bag and case on and by it, give him a ten-cent tip—which is just enough and not too much for your services, unless you have some extra or heavy luggage or he has to walk a long way or has performed some especial service for you. The interior of a sleeping-car by day is shown in Fig. 9.



Courtesy New York Central Lines.

FIG. 9. INTERIOR OF SLEEPING CAR BY DAY.



Courtesy New York Central Lines.

FIG. 10 INTERIOR OF THE DINING CAR.

Tickets, Please!—After you are seated you can take things easy until the train and Pullman conductors come through to take up your tickets. As the Pullman cars are run by the Pullman Company, they are private property, but the Pullman and train conductors work together when they collect the tickets. The train conductor will take up your railroad ticket and give you a receipt for it, and the Pullman conductor will tear off half of your Pullman ticket and keep it and give you the other half, or *identification slip,* as it is called, which serves the purpose of a receipt.

Dinnah Am Now Being Served!—As meal-time comes on you have a feeling that your eyes have been feasted a-plenty and your stomach not e-nough, and these conditions are accentuated by a waiter with his black face and shiny eye and his immaculate white coat and gold buttons—or maybe they are only plated —singing out, " Dinnah am now bein' served in the dinin' car! " or " First call for suppah! " And you immediately take notice, wash up and hie yourself three or four cars ahead for the gladsome event which is pictured in Fig. 10.

The crew of the dining-car is made up of a *steward,* a clean-cut white man, always handsome, and who looks as if he had been ordained by nature to sit in the House of Representatives rather than to merely see to it that your meals are served to the queen's taste and that the company's money is properly taken care of. Then there are four *culled gemmen,* all dressed in white, who would pass for troopers of a high-class minstrel show rather than a crew of high-toned waiters.

As you pass the little two-by-four kitchen, take a peep into it out of the tail-end of your eye, and you will see a white *chef* (pronounced *shef*), that is, the head cook, and a further cursory glance will reveal the fact that he is aided and abetted in his culinary operations by a couple of private secretaries, but who are commonly known by the undignified name of *second cooks.* Together they are doing an act with pots and pans and sauces and jams that would make the average juggler on the stage look like a mountebank.

As you enter the dining-car—you do not go into it—the steward will sometimes show you a seat himself if you look especially important, but more often one of the aforesaid waiters will pull a chair at a table and seat you. He will put a *menu card,* or bill of fare, before you and lay a pad of paper, called an *order pad,* together with a pencil, in front of you. When you have made a mental comparison of the items on the card with the needs of your inner man, and again with the contents of your pocketbook, you write down your wants on the *order form.* (Note the *Menu Card,* Fig. 11.) You don't need to put down the price after the items or the number of portions, if you are alone, but if you are dining with a friend you write his order and yours on the same form and then you put down the number of portions of each thing you want.

In the years gone by meals on dining-cars were always served *table d'hôte* (pronounced *tab'-el-dote*), which means that a regular meal was served for a stated price, usually about one dollar, but those good old days are gone forever. There were many travellers who didn't want a full dinner and more of them who didn't care to pay as much as a whole dollar for a meal. So it was that the Pullman company, always

THE TWENTIETH CENTURY LIMITED

DINNER SPECIALS

BISQUE OF NEW TOMATOES *with Rice*	Cup 30; Tureen 45
JELLIED CONSOMME	Cup 45; *Hot*, Cup 35
CLAM BOUILLON	Cup 30
KRAUT JUICE	25
TOMATO JUICE COCKTAIL	25

* * *

FRENCH SARDINES *in Olive Oil*	65
CANAPE OF RUSSIAN CAVIAR	75
SHRIMP COCKTAIL, *N.Y.C.*	65
IMPORTED TUNNEY FISH *in Olive Oil*	65
BROILED FRESH BLUEFISH, *Lemon Butter, Potatoes Mexican*	95
FRESH SHAD ROE, *Saute Meuniere, Bacon, Veloute of New Spinach*	95
FILET OF WEAKFISH *Au Gratin Bordelaise, New Potato Persillade*	95

* * *

CALF'S LIVER AND COUNTRY BACON, *Fresh Mushroom Sauce, New Potatoes Saute, New Cauliflower Polonaise*	95
LAMB CHOP COMBINATION, *20th Century*	95
PAPRICA OF YOUNG CHICKEN *with Noodles, New Carrots Vichy, New Potatoes*	95
COLD ROAST RIBS OF PRIME BEEF, *Lettuce and Egg, Mayonnaise*	1 10
COUNTRY HAM *with Wilted Lettuce, French Fried Potatoes*	95
POACHED EGGS *on Toast, Hollandaise, New Aparagus, New Potatoes with Chives*	95
SPAGHETTI *with Green Pepper and Pimientos in Cream*	65
COMBINATION SALAD, *Roquefort Dressing*	65

* * *

NEW POTATOES *Saute Argentine*	50
NEW GREEN PEAS *in Butter or with Chives*	50
NEW CAULIFLOWER *Polonaise*	50
VELOUTE OF NEW SPINACH *with Egg*	50
NEW GREEN ASPARAGUS *with Butter or Hollandaise*	65

* * *

APPLE TAPIOCA CUSTARD *with Cream*	35
CREAM CHEESE *with Melba Toast, Guava Jelly*	40
FRESH BERRIES *with Cream*	45
GREEN APPLE PIE	25; *with Cheese* 35 *A la Mode* 45
BERRY SHORTCAKE *with Whipped Cream*	45
FRENCH VANILLA ICE CREAM *with Crushed Berries*	45
CANTALOUPE, *on Ice, Half*	35; *A la Mode* 50
ICED TEA OR COFFEE	30

[SPECIAL PLATE COMBINATION]

GRILLED SPRING LAMB CHOPS WITH BACON
FRESH MUSHROOMS SAUTE
NEW GREEN ASPARAGUS TIPS
NEW POTATOES IN CREAM
ROLLS AND BUTTER TEA, COFFEE, MILK

[$1.35]

ABOVE PORTIONS PER PERSON ONLY
AN EXTRA CHARGE OF 25 CENTS PER PERSON WILL BE MADE FOR MEALS SERVED OUT OF DINING CAR

FIG. 11.—A MENU CARD

seeking to please their patrons, put the *a la carte* (pronounced *ah-la-cart'*, with the accent on the *cart*) system into effect, and this means that you order just what you want and pay for just what you order. In this way you can get something to eat for as little as thirty or forty cents, or as much as your indigestion and a few other little things will stand for.

When you have finished your repast the waiter will bring back your check with the prices of the items marked on it and added up, and he will give this to you on a small silver salver. Whatever the amount is, lay a bill on the salver to cover it, and when the waiter returns with your change give him a tip of ten per cent of cost, provided the amount is over one dollar, and you will be doing the right thing by yourself and him.

On the Observation and Club Cars.—When you have dined well you can go back to your seat in the sleeper and read a novel or a magazine, or you can go on through to the observation car and look over the latest weeklies, or you can write a letter *en route* (pronounced *on rute*), which means *on the way,* on letter paper with the special name of the train you are on printed on it, or you can have the stenographer type it, and he will post it for you at the next stop.

Some of the limited trains carry *club cars,* and usually these have a barber shop and are fitted with a shower bath, so that you can get your hair cut, have your face massaged, your nails manicured and take a bath if you think time is a factor and money is of no account. Finally, in any kind of a car you can get into a friendly discussion with genial fellow-travellers, but whenever you meet a particularly affable stranger

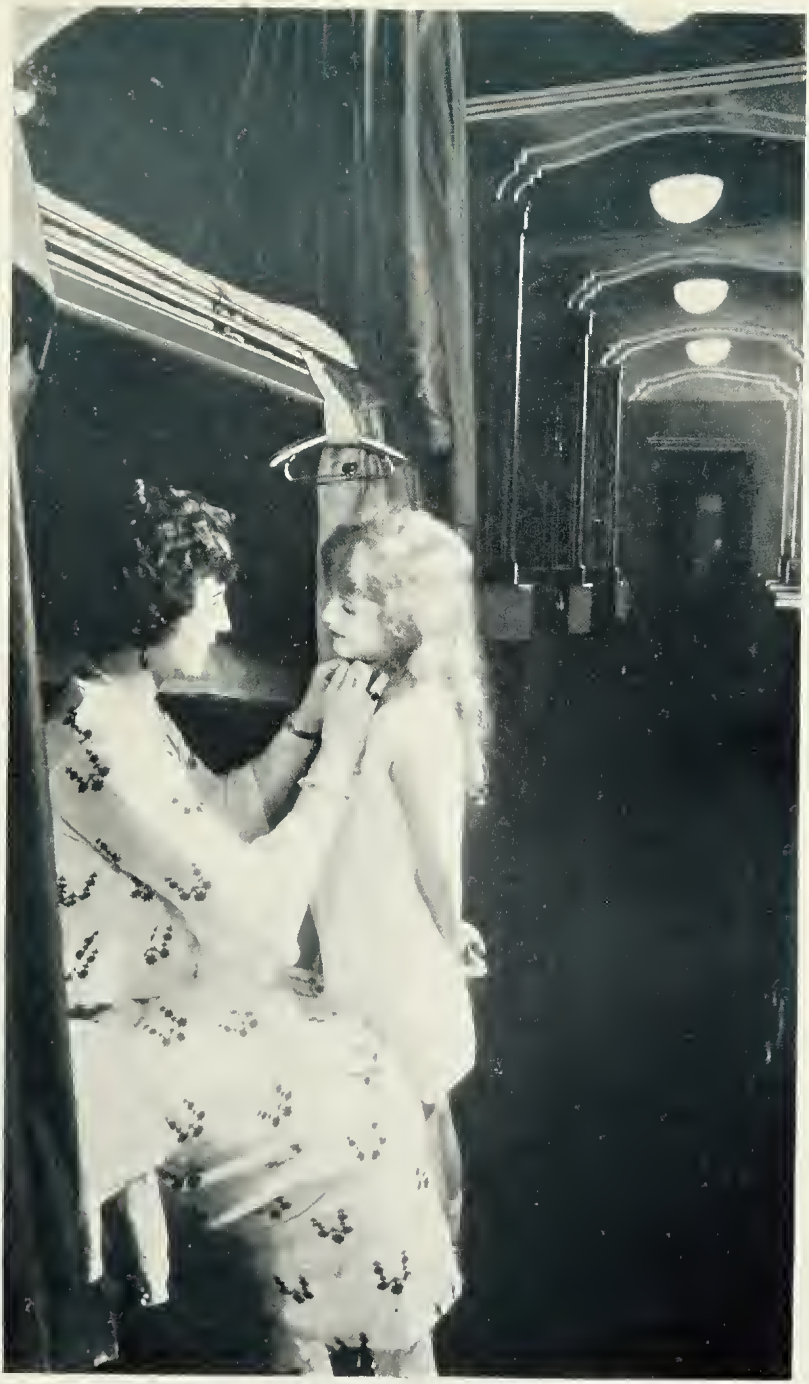


FIG. 12. BEDTIME, SHOWING UPPER AND LOWER BERTHS.

who invites you to sit in a little game in the smoking-room, decline with thanks, go out on the platform of the observation car, enjoy the receding scenes and think sensible thoughts.

Making Down Your Bed.—When night comes on and you are tired out from the sheer joy of travelling and want to turn in, meander into your own car and say to the porter: "Please be good enough to *make down* my bed," for a Pullman berth is made down and not up. When Hambone has performed this magical act of changing a couple of high-backed car-seats into a bungalow you will find that it contains two beds, called *berths,* an *upper* and a *lower* one, as Fig. 12 clearly shows.

In every berth there is a miniature electric light set in the panel at the side of the window close to your head. This electric light fixture is of peculiar construction, for there is a little oval-shaped cover that is hinged over a cavity, and this latter contains the lamp. When the cover is closed *down* the current is cut off and you'd hardly suspect that there is a lamp back of it; but when you want a light all you have to do is to press a button at the bottom of the cover and it will spring open, then lift up the cover, which becomes a reflector, the current is turned on and you will have a light.

When you have turned on the light, sit down on the edge of your bed, pull and button the curtains together, and then take off your coat and vest and hang them on the hanger that is inside of the curtains. Now get your pajamas out of your bag and then push the latter well under the seats that form your bed. At the head and foot of your bed you will see the parts of the seats that form the head-rests in the daytime, and these are pivoted so that they can be pulled half-way down, as shown in Fig. 13, and make a couple of shelves on which to lay your clothes.

Stretched along under the window you will find a little hammock about three feet long, and you can use this as a catch-all for your handkerchief, garters and other like trifles. Now spread a handkerchief out flat on the bed and put your wallet, keys, knife, loose change—in fact, everything you have in your pockets that is of value—on it, except your watch, and tie the four corners of it together so that the articles in it cannot slip out. Put it and your watch inside of the pillow-slip and see to it that the opening of the slip is toward the window. It will be very hard for anyone to get at these things unless you belong to the ignoble order of the seven sleepers.

Take off the rest of your clothes, fold them up carefully and lay them on the head and foot shelves. Set your shoes under the edge of the bed just back of the curtains, and the porter will take these in the wee sma' hours, brush them up spick and span and put them back all ready for you when you get up. Finally, put on your pajamas, get into bed and turn off the light, and you will soon be lulled to sleep by the motion of the car and the music of the wheels as they clickety-click over the rails, with an occasional deep-throated, double-voiced blast from the whistle as it sounds a warning note before it reaches a grade crossing.

If you should want a drink, a little more air, or another cover in the night just put your finger on the push-button in the panel between the windows and ring for the porter. He will answer your call by poking his shiney face between the curtains, with an air of injured innocence. But don't let this *fade you*—just tell him what you want and he'll get it in due time, by which I mean in his own good time.

When you get up in the morning be very careful that some one with little or big feet doesn't step on your toes, for even though he is "so sorry," and this little courtesy is often neglected, and whether you grant the pardon or not it won't cure the hurt. If you are a girl, put on your shoes and kimona and, putting your toilet articles in its roomy pockets, go to the ladies' room to make your toilet. If you are a boy, put on your trousers and shoes, and take your shirt, collar and tie and your bag and go to the smoking-room, and which is also the wash-room, and there wash up and dress.

Even if there are ladies getting up and moving through the aisle of the car, you don't need to feel the least bit embarrassed in your partial dress and with tousled hair. They won't deign to notice you, and don't you dare to see them, for they will look quite different from the way they did the night before or the way they will look an hour later. So, neither of you will have anything on the other for looks. When you get to the wash-room you will find hooks along the partitions, and hang your clothes on one of them.

You will see a small basin where you can clean your teeth, and never use the wash-basin for this purpose under the penalty of showing that you are the rankest kind of an ignoramus. You will find a bunch of fresh towels in a rack above the wash-basins, and when you have used one or more and are done with them, throw them into the catch-rack in the corner of the room. The Pullman Company also supply soap,[1] combs and brushes for those who have failed to provide their own, but you should always use your own sanitary toilet articles. After a good wash, put on some clean linen and a fresh tie, then rub up your finger nails a bit and have the porter brush your clothes, when you will feel just like investigating the dining-car again.

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[1] Liquid soap is furnished and, as this is perfectly sanitary, you need not use your own.

The Fellow in Upper 6.—In the foregoing description I have assumed that you have a lower berth, but now let's go back to the night before and suppose you are the fellow who has the upper berth. When this is the case you will find the matter of going to bed is not nearly as easy or half as pleasant as when you have a lower one. First you must tell the porter you want to turn in, and he will bring a step-ladder with about three steps in it.

If your fellow-traveller who has the lower berth is not already in bed, you can sit on the edge of his berth and take off your shoes, and this will help some. Now mount the ladder—you don't need to kiss your hand to the audience—and then with the agility of a gymnast you seat yourself on the edge of your own bed, being careful the while not to bump your head. (Poor stuff, as versifying goes, but a hard fact if you do it.) To take off your coat is easy enough, but to take off your trousers sitting down with your feet dangling over the side and resting on nothing but thin air is a stunt that, whether you succeed or not, will make you forever after taboo the upper berth.

When you want to come down you will have to ring for the porter, and then Rastus will presently rescue you with his little ladder, like a hero of the Darktown Brigade who carries a heavyweight female octoroon to a place of safety. Far better than either an upper or a lower berth is a drawing-room or a compartment, for then you can undress and dress as you will and be as secluded as you would be in your own home.

Nearing the End of the Run.—When you are getting close to the end of your trip, or wherever you are going to get off, put all of your belongings in your bag and be ready to leave the car when the train pulls into the station, but don't stand up in the aisle, sit on the arm of a seat or pick up your bag. Take things easy and quiet like and let the other folks do the nervous act if they want to, for neither you nor they can get off the train until it stops.

The porter will come along in due time and brush off your clothes, and this is your cue to hand him your tip. This should be about twenty-five cents for every twelve hours you are on his car, that is, a quarter from New York to Buffalo, half-a-dollar from New York to Chicago, and so on. And it's well worth it, too, for he's not only made down your bed, but he's shined your shoes, brushed your clothes, told you that the train was umpty minutes late when it pulled into Elkhart and that the engineer ran ninety miles an hour from there to Hammond so that you could arrive in *Chi* on the tick of the watch.

The porter's last duty is to take your luggage and pile it up with the others in the vestibule. He will then wipe off the hand-rails with a piece of clean waste, lift the trap-door of the platform and, when the train stops, he will remove all of the bags and suitcases to the station platform, where he hands them over to their respective owners or to the station porters, who are crowding around like a swarm of bees to help the travellers go to wherever they want to go and, incidentally, to get their tips.

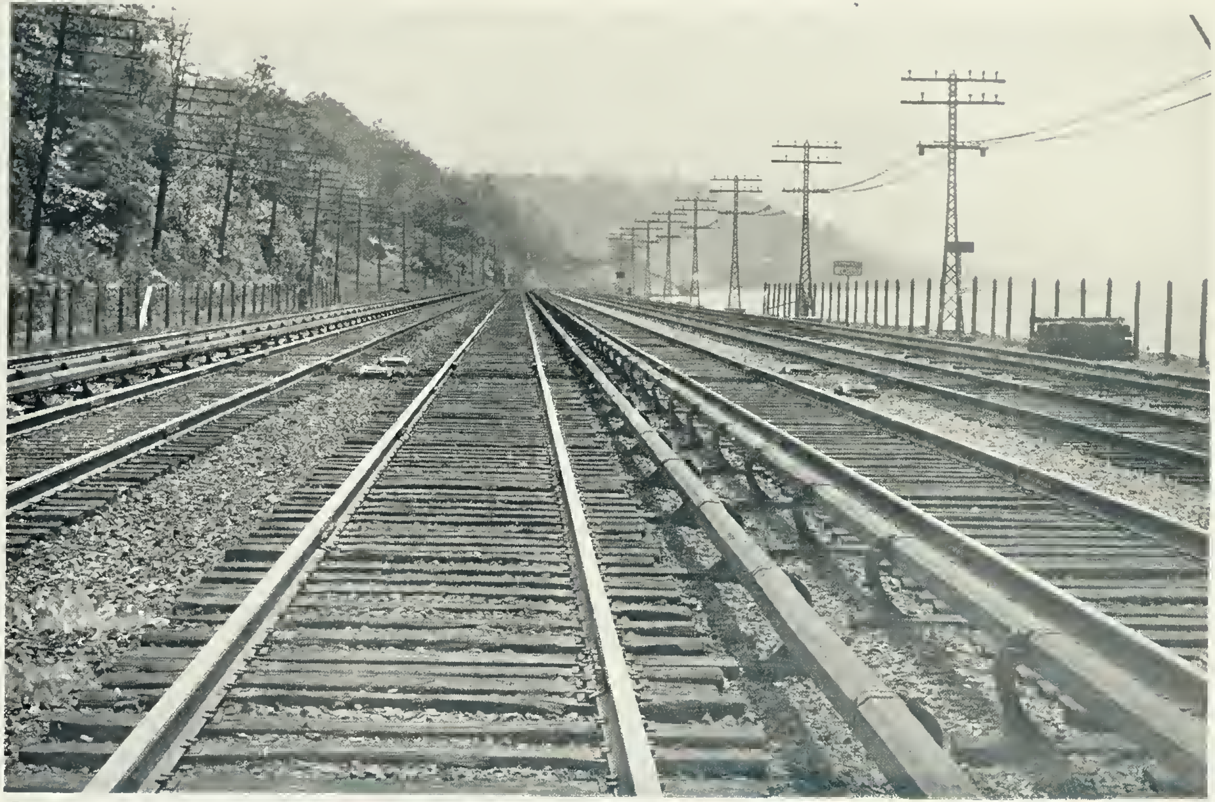
IV

THE TRACK AND TRAIN

EVERY year thousands of people ride over the great steel highways in mighty trains, and yet but few of them have the faintest conception of how they are made and work, beyond the obvious fact that the former consist of a pair of parallel rails laid on ties and the latter are pulled along by an engine on wheels. Now, to be a real traveller, you not only have to cover ground, but you must know about everything you see and, at this particular stage, how railways are built and trains are hauled and operated.

The Broad Steel Highway.—One of the mightiest things made by the hands of man that you will ever see on land is the broad steel highway that binds the various states of the Union together and the gigantic engines and all-steel trains that run over them, and which carry you and millions of others from one end of the country to the other at high speeds. Not to know how railroads are built, how engines work and trains are run shows on the face of it that you belong to that large body of travellers who see little and grasp still less of what they see.

As you speed along to the clickety-click of the car-wheels rolling over the rails you will hardly be able to realize that before the road was built men called *surveyors* went over the same route afoot or with pack-mules and mapped out the path of the easiest grades



Courtesy New York Central Lines.

FIG. 14. THE ELECTRIFIED SIX-TRACK STEEL HIGHWAY OF THE NEW YORK CENTRAL ALONG THE HUDSON.

and where the fewest bridges and tunnels would be needed. For this reason railroads are built close to the shores of rivers, around hills and across level stretches of land wherever it is possible to do so. Then the *right of way,* that is, a strip of land, one hundred feet wide or more, must be acquired for laying the track or tracks.

Making the Road-bed.—After the surveyors have mapped out the route the work of building the *road-bed* is begun. This is done by filling up a gulley here, digging through a hill there and blasting away some rock somewhere else until the top of the road-bed, or *sub-grade,* as it is called, is as level as it needs to be. All of this work is done by a *construction gang* under the strong mind and red hair of a *construction foreman,* and this group of labourers also *ballast* the roadbed, set the ties and lay the rails as they go along.

The ballast is the top covering of fine broken stone, gravel or other material which is firm and porous and yet gives off no dust. In the ballast are set the ties—big sticks of wood about six inches thick, eight inches wide and eight feet long. These ties are set about twenty-one inches apart from centre to centre, and so you ride over approximately three thousand ties every mile, or some nine million ties in going across the continent.

On these ties are spiked the rails—great bands that are made of steel good enough, nearly, for pocket-knives, and they must be strong and hard to stand the strain and pounding they get from the heavy trains that constantly run over them.

There are three parts to a rail, and these are (a) the *head* or top, (b) the *flange* or bottom, and (c) the *web,* which is the thin part that joins the head to the flange. The lightest rails that are used weigh eighty pounds to the running yard, and most of the big lines use rails that weigh one hundred and five pounds to the running yard; for this reason they are called *one hundred and five pound rails,* but as each rail has a length of thirty-three feet, its weight is almost thirty-five hundred pounds. Some rail!

The rails are spiked down to the ties and the abutting ends are held tightly together by a fish-plate on each side of them when they are bolted together. A pair of these parallel rails form the *track,* and this is exactly four feet eight and one-half inches, measured between the inner sides of the heads of the opposite rails, and this is called the *gauge* of the track. After the track is laid it is carefully levelled up, and it is then ready for use. The great electrified six-track steel highway of the New York Central Lines is shown in Fig. 14.

Besides the track construction there are stations to be built, telegraph and telephone lines to be strung, a block signal system to be installed (see Chapter V), and then comes the *rolling stock,* as the locomotive and cars are called. When all of these things are done, men to operate the road must be on the job, and these range from the president of the company clear on down to the menial car cleaners.

About the Locomotive.—However wonderful the *locomotive* is, or *engine,* as it is more often called for short—and it is wonderful—yet, after all, it is only a steam boiler and fire-box and a pair of steam engines, and all of which are mounted on wheels. Fig. 15 shows a side view of a locomotive known as the *Pacific type,* and this has six drive wheels, three on

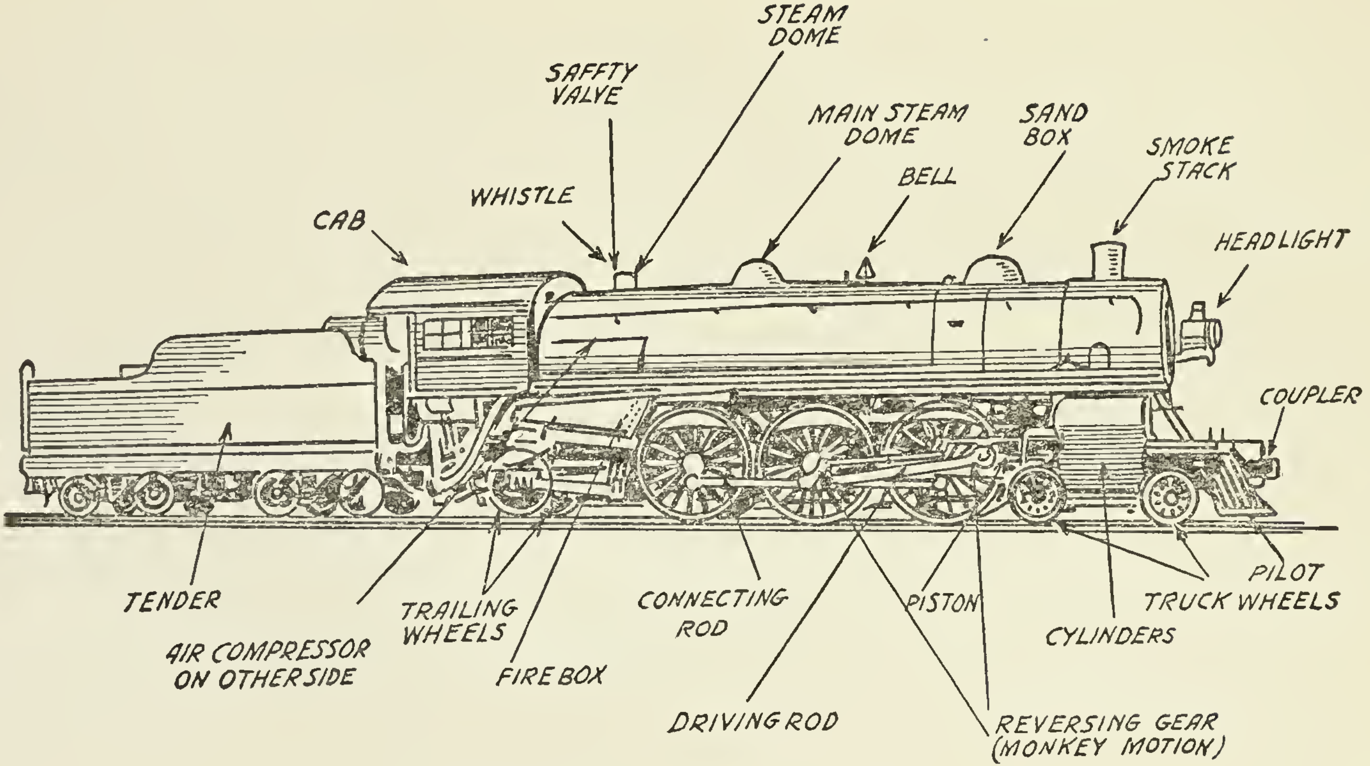


Fig. 15.—The Pacific Type of Locomotive

each side. The *Atlantic type* is much lighter and has only two drive wheels on each side, or four in all. The first named engine, with its tender, weighs nearly half-a-million pounds.

A locomotive is built up of four chief parts, and these are (1) the fire-box, in which the coal or oil is burned; (2) the boiler, in which water is changed into steam by the heat from the fire-box; (3) the steam chests and cylinders, in which pistons are fitted that slide forth and back and which change the energy of the expanding steam into *reciprocating motion,* and (4) the driving wheels, which are connected with the pistons in the cylinders and which change the reciprocating motion into *rotary motion,* and all of these are so made and put together that the finished locomotive can pull, not only its own weight, but a train of ten steel Pullman cars at a sustained speed of sixty miles an hour.

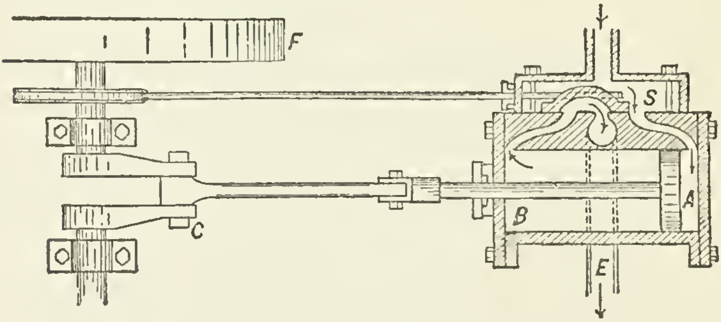


FIG. 16.—HOW AN ENGINE WORKS

As the boiler makes steam, the good *live steam,* that is, the very hottest steam which rises to the top, fills the large dome which is called the *main steam dome.*

A pair of pipes is connected with the main dome, and these lead the steam down through the boiler to the steam-chests on the cylinders. The steam-chests are fitted with slide valves, as shown in Fig. 16, and these let the live steam into one end of the cylinder and then into the other end, and as there is a *piston-head* in each cylinder, when the steam is admitted between one end of the cylinder and the piston-head it expands, and this forces the piston to the other end. Then the slide valve cuts off the steam at this end, when it exhausts into the open air, and admits it into the other end and forces the piston back again. As the pistons are connected with the drive wheels, or *drivers,* as they are called, by *connecting rods,* the to and fro motion of the pistons push and pull the wheels around.

The thing that makes a locomotive look complicated is the gear that is necessary to work the slide valves, or *monkey motion,* as it has been nicknamed,—and it is by means of a level attached to this mechanical movement that the engineer is able to reverse his engine and so make it run either forward or backward.

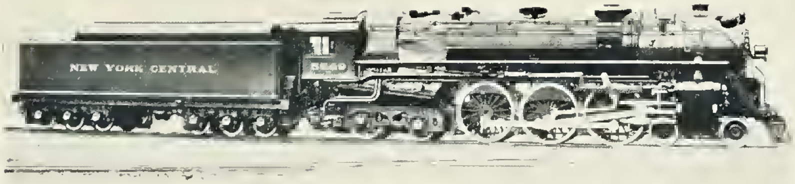
When an engine starts out with its heavy load it puffs very sharp and loud at first, and then as it gets up speed it puffs faster and with less noise. This puffing is caused by the used or exhaust steam in the cylinders escaping through the *flues* of the boiler and out of the *smoke-stack* into the open air. The reason the steam is made to exhaust through the flues is so that a better *draft* is had through the fire-box and, hence, the coal or oil burns better and makes a hotter fire.

As each cylinder exhausts twice to each revolution of the drivers, and as the pistons are set so that when one of them is at one end of its cylinder the other piston is in the middle of its cylinder there is an exhaust at each quarter revolution of the drivers and, it follows, there are four exhausts or puffs every time the drivers make one complete turn. The heavier the load the engine has to pull, the louder the noise of the exhaust, but when the engine gets up speed the momentum helps it to pull the train along, a smaller amount of steam is needed, and so the puffing becomes a low and almost continuous roar.

On top of the engine and just back of the smoke-stack is another and smaller dome, and this is the *sand-box.* A long pipe runs from each side of the sand-box down to and over and close to the rails, and just in front of the drive wheels. On rainy days and in frosty weather the engineer, or *engine driver,* to give him his right title, lets a fine stream of sand run on the rails, and this provides enough friction for the wheels to keep them from slipping when he starts the engine.

Between the sand-box and the main dome is the familiar old *bell* that clangs out its timely warning when the engine starts or backs up, or when it is running over grade crossings or through the streets of a city. Finally, back of the main dome is another and smaller steam dome, and in this is fitted the *whistle* and *safety-valve.*

Back of the boiler, and covering the rear end of the latter, is the *cab.* On the right hand seat, on most lines, the engine driver sits, with the *reverse lever* at the side of him, while the *throttle,* with which he admits steam into the cylinders, is in his left hand, and the handle of the *air-brake* is right below it. The *fire-*



THE PACIFIC TYPE OF LOCOMOTIVE.

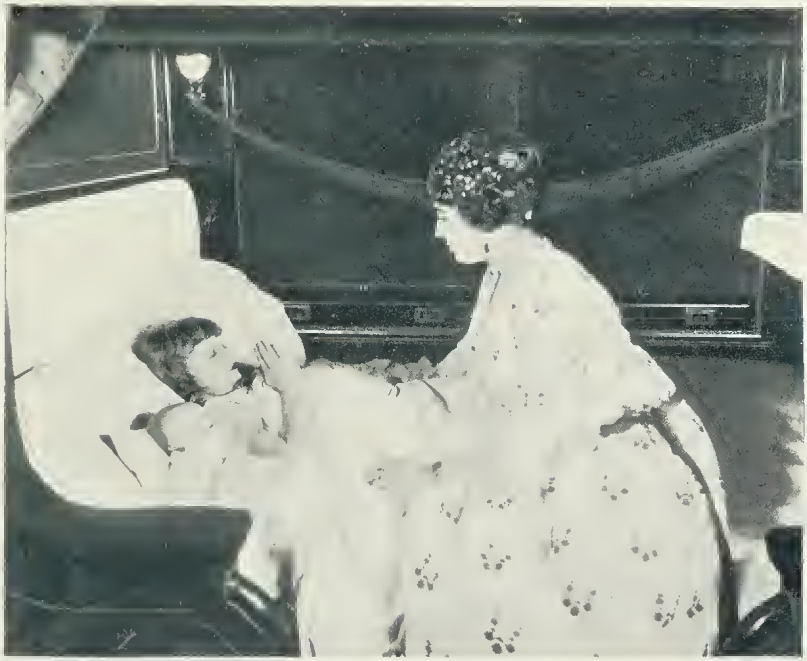
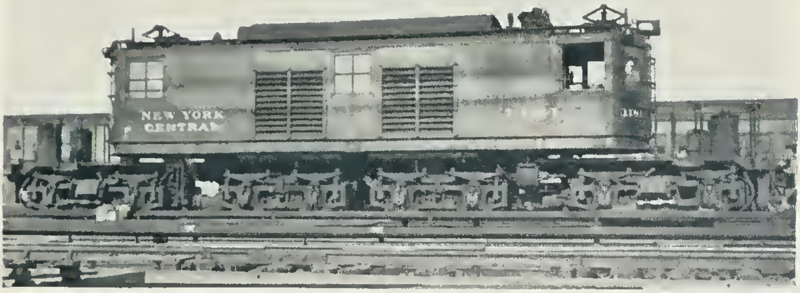


FIG. 13. THE BED MADE DOWN.



Courtesy New York Central Lines.

FIG. 17. A POWERFUL ELECTRIC LOCOMOTIVE.

man sits on the other window seat, and it is his business to see that there is the right amount of water in the boiler and that the steam in it is at the right pressure, and a few little things like that.

There are two other devices I forgot to mention back there where they belong, and these are the *headlight* and the *pilot*. The headlight is first and foremost at night, but the *pilot*, or *cowcatcher*, is ahead of it, at least in the daytime. The pilot was designed and used in the early days for the express purpose of boosting cattle off of the track, if these animals didn't ditch the train first. Its chief mission now seems to be to occasionally puncture a motor-car and dispatch the souls of its human freight into the celestial abode where blest spirits have no further use for gasoline buggies.[1]

When the engine stops you will hear a chugging sound as if some part of it is still running, and it is. This is the steam-operated *air-compressor* that is fixed to the left-hand side of the boiler just ahead of the cab. It is this compressor which compresses the air in the closed tanks under the engine and cars to work the *air-brakes*, and this will be explained in the next chapter.

Every engine has a *tender* coupled to it, and this is a car made to hold water and coal or oil, whichever is used for fuel. Engines that haul ordinary trains have to stop to take on water, that is, to fill up the tender at *water-tanks*, but fast through trains have no time to do this, and so they are fitted to take water from a steel trough which is about eight inches deep, twenty inches wide and about two thousand feet long, and this is laid between the rails on the ties. This trough is kept full of water by a pumping-station.

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[1] British and Continental engines have neither headlights nor pilots, for there are no grade crossings.

The tender is fitted with a scoop, and when the engine comes to a trough the fireman drops the lower end of the former into the latter and the high speed at which the engine is running forces the water up-hill through the scoop and into the tank of the tender. Since the water in the tender may reach a lower level than that in the boiler, it is forced into it by means of an *injector,* a device by which a stream of steam is made to carry a stream of water with it.

The Great Steel Train.—The *Pennsylvania Special,* of the Pennsylvania, and the *Twentieth Century Limited,* of the New York Central, and other fine trains are made up of from six to eight all-steel, *vestibule cars,* that is, the platform of each car is enclosed with a roof and walls, and this is connected with the vestibule of the next adjacent car by means of a flexible coupling, and in this way a protected passageway is provided through the entire train.[2] These trains include a club car, a dining-car, an observation car, and from three to five sleeping-cars.

The *club car* is the first car back of the tender. A limited amount of mail and baggage is carried in this car; back of the mail and baggage compartment is a barber shop and shower bath. A *valet* also has a place in this car, and he will press your clothes for about the same price that a tailor in New York or Chicago will charge you. In this car you will also find a library and a mail-box, while stock quotations and baseball scores are posted up *en route,* so that he who rides may also read if he wants to.

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[2] In England and on the Continent a train made up of vestibuled cars is called a *corridor* train.

The *dining-car* is usually next in order when it is coupled to the train, for it is only taken on at the end of certain divisions where the engine is changed. It is kept on about three hours for breakfast and dinner and a couple of hours for luncheon. While the Pullman Company generally operate the dining-cars, some railroad companies own their own and operate them.

The *sleepers* are of the standard Pullman type, that is, there are twelve sections, each of which has two berths, a dressing-room for the women at one end, a smoking-room and wash-room for the men at the other end, and a drawing-room near each end.

About half of the *observation car* is made up of *sleeping compartments* and a small part is given over to a library. Some half-an-hour before the train pulls out of a big station telephones are *plugged in* and you can talk to your friends and business associates right up to the minute of leaving. If you are expecting telegrams, all you have to do is to sign your name on the register and they will be handed to you. Oppositely, if you want to send a telegram, a messenger boy who is on the train will take it to the office for you.

The services of a stenographer can also be had on the car, and it is your privilege to dictate your letter, or letters, free of charge, but in my humble opinion you should pay him for the service just as you would a public stenographer in a hotel.

The Electric Locomotive.—At the different railway termini,[3] that is, at the ends of a railroad, and sometimes in between, *electric locomotives* are employed to haul the passenger trains. The New York Central has thirty-four miles of *electrified* track and nearly a thousand trains are hauled over it every day. The through trains are hauled by tremendously powerful locomotives of the type shown in Fig. 17. Each locomotive weighs one hundred and fifteen tons or more, and is rated at two thousand horsepower, but it will develop, when running, something like four thousand horsepower and it can haul a thousand-ton train at a speed of sixty miles an hour.

About Railway Stations.—Every large station has, besides the regular ticket office, a Pullman ticket office, and at these two offices you can learn all you may want to know about tickets. There is also a baggage room, a telegraph office, telephone booths with operators, cab service and city express company, a news-stand, lunch counter and restaurant and rest rooms.

To find these different services or for any other information you may need, go to the *information bureau,* which is always located in a central and conspicuous place in the main waiting-room. The smart young man in the bureau will tell you what time the 1:30 train leaves; that No. 9 will come in on track 10; that No. 6 from Chicago is 4 seconds late, what 2-dollar-a-day hotel you can stop at for $3.50; why the streets of New York are always torn up, and if Mr. Hoover is going to make prohibition effective or a joke, as did his predecessor. He will also answer a hundred and one

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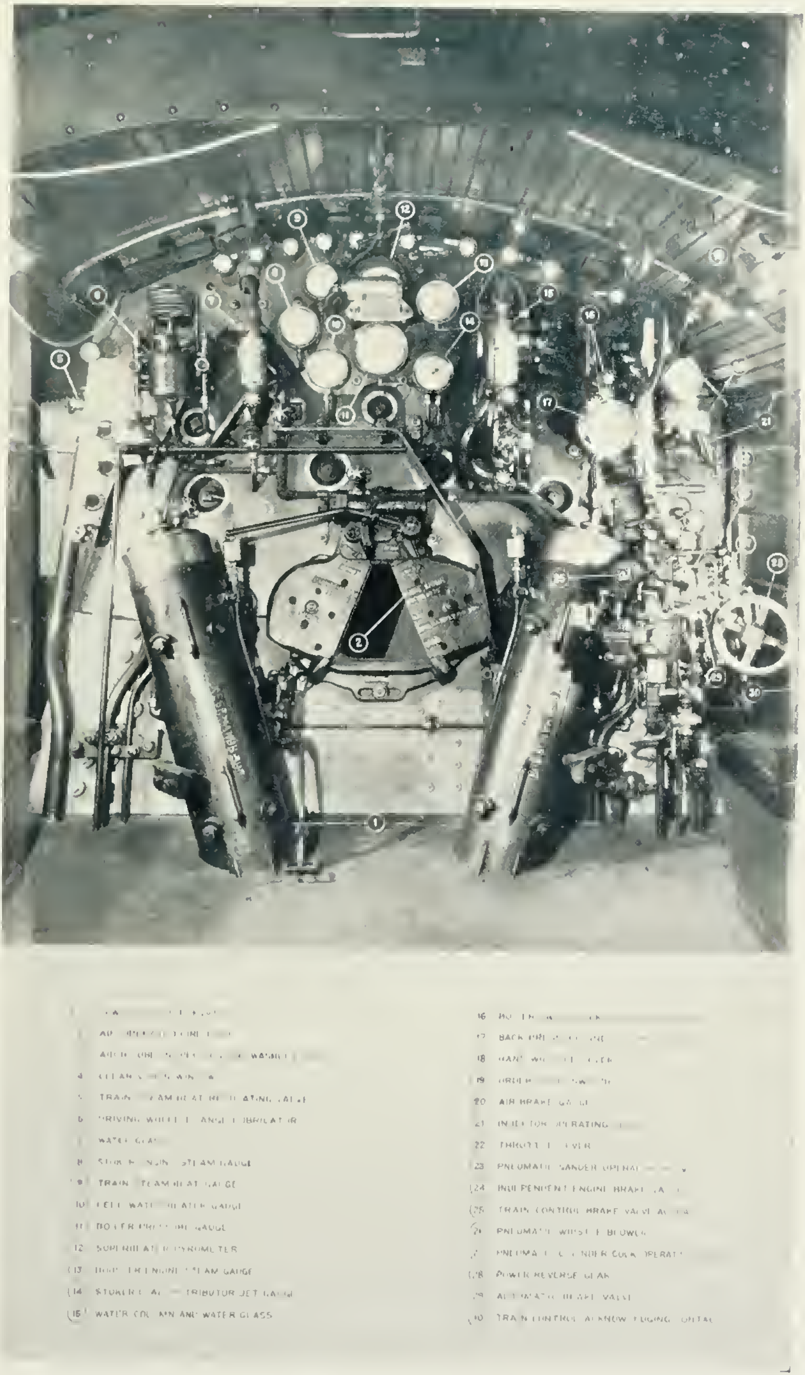
[3] Plural for terminus.


1 [illegible]
2 AIR OPERATED FIRE DOOR
3 [illegible] WASHER [illegible]
4 CLEAR VISION WINDOW
5 TRAIN STEAM HEAT REGULATING VALVE
6 DRIVING WHEEL FLANGE LUBRICATOR
7 WATER GLASS
8 STOKER ENGINE STEAM GAUGE
9 TRAIN STEAM HEAT GAUGE
10 FEED WATER HEATER GAUGE
11 BOILER PRESSURE GAUGE
12 SUPERHEATER PYROMETER
13 BOOSTER ENGINE STEAM GAUGE
14 STOKER COAL DISTRIBUTOR JET GAUGE
15 WATER COLUMN AND WATER GLASS
16 [illegible]
17 BACK PRESSURE GAUGE
18 HAND WHISTLE LEVER
19 ORDER [illegible] SWITCH
20 AIR BRAKE GAUGE
21 INJECTOR OPERATING [illegible]
22 THROTTLE LEVER
23 PNEUMATIC SANDER OPERATING [illegible]
24 INDEPENDENT ENGINE BRAKE VALVE
25 TRAIN CONTROL BRAKE VALVE [illegible]
26 PNEUMATIC WHISTLE BLOWER
27 PNEUMATIC CYLINDER COCK OPERAT[illegible]
28 POWER REVERSE GEAR
29 AUTOMATIC BRAKE VALVE
30 TRAIN CONTROL ACKNOWLEDGING CONTAC[illegible]

Courtesy New York Central Lines.

INTERIOR OF LATEST NEW YORK CENTRAL LOCOMOTIVE.

other questions of sense and nonsense which only travellers who have never travelled can think up. He will also hand out time cards and maps and things if you are not too nice to him.

V

SAFETY FIRST

IN the days when railroads were young and the telegraph had just been invented, the running of trains was left entirely to the engine drivers. When only one train ran each way a day and the railroads were seldom more than one hundred miles long, all that was needed was to start a train out from each end of the line at the same time and have them pass each other at some point about half-way between the terminals. If one of the engines happened to break down before it reached the other train, the latter would lay over and wait for it for hours, if needs be, at the station where they were scheduled to pass, while the passengers were left to stew in their own juice.

How the First Trains Were Dispatched.—But all of this kind of intolerable delay was changed one bright autumn day in 1851. It happened on the Erie Railroad at a place then called Turners, but which has since been changed to Harriman, New York. Conductor Stewart was in charge of the west-bound express when Superintendent Minot happened to be aboard. The train was to wait for the east-bound one to pass it at Turners, some forty-seven miles from New York City. This latter train had not yet arrived and the west-bound train could not go on for an hour unless the east-bound one reached Turners before that time.

There was a telegraph office at Turners, and Superintendent Minot telegraphed to the operator at Goshen, fourteen miles up the line, asking him if the east-bound train had left that station. The operator's reply was that it had not yet arrived there, which showed it was way behind time, so Superintendent Minot wired the Goshen operator to "hold the train for further orders."

This done, he wrote an order which read: "Run to Goshen regardless of opposing train," and handed it to Conductor Stewart, who, in turn, read it to Engineer Lewis and told him to go ahead. The surprised engine driver asked him if the superintendent thought he was several kinds of a fool, and refused to obey the order. Superintendent Minot then climbed into the cab and took the throttle himself, while the engineer jumped off of the engine and settled himself in the rear seat of the rear car.

The superintendent ran the train to Goshen and found that the east-bound train had not, even then, reached that station. He then telegraphed to Middletown, and from there to Port Jarvis, in turn, and when he reached the yards of the latter station the east-bound train was just pulling into it. The passengers were not only saved an hour's time, but more or less real or fancied trouble. And so this was the way that the first train dispatching was done. From that time on the movements of trains were controlled by telegraph, and when the railways got so big that numerous trains were daily sent out over the lines a man was put in charge of all of them, and thus it was that the *train dispatcher* was born.

How Trains of Today Are Dispatched.—As railway lines grew longer they were marked off into *divisions,* and each one of these had its own train dispatcher.

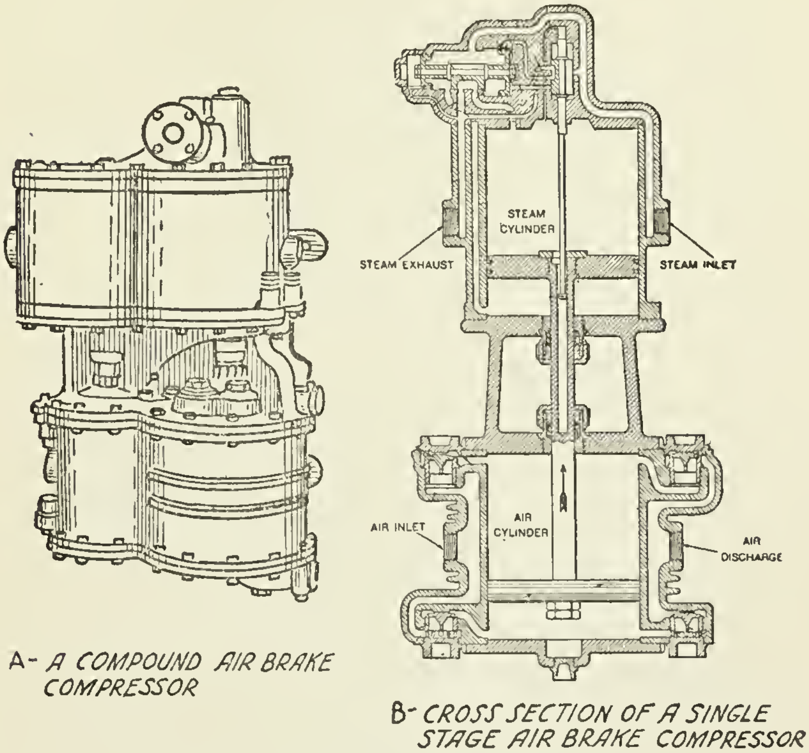
Until within recent years the telegraph was used for dispatching trains, but it has now largely given way to the telephone, and the *block signal system* has greatly simplified the whole thing and stands first and foremost as a means of preventing collisions.

If you go into a train dispatcher's office at the end of some division you will see a man seated at a desk talking quietly into a telephone transmitter, and he is the *train dispatcher.* You will also see three or four other men at desks scanning large sheets of paper called *train sheets,* with numbers of the trains running in the division written on it by the train dispatcher, and these men are his clerks.

Every time a train passes a station, the operator there telephones its number to the train dispatcher, and he marks it on the train sheet. This sheet has the number of all the trains, together with their arrival and departure from all stations marked on it in parallel columns. It is handed to one of the clerks, who simply sees that each train has passed its station on schedule time. If a train is late, the train dispatcher sends orders to trains following it as to how they shall proceed. Between the stations the block signal system takes care of the trains, and so the whole art of train dispatching is not nearly as complicated as it at first appears to be.

Double and Quadruple Tracks.—Nearly all *trunk lines,* as through lines are called, are *double tracked,* and this allows all trains that are going in one direction to use one of the tracks, and all of those going in the opposite direction to use the other track. This makes *head-on* collisions impossible, but it still leaves the train dispatcher, the conductor and the engineer to see to it that *rear-end* collisions do not happen.

This would seem to be an easy thing to do, but when you consider that there may be upwards of fifty trains a day moving over the same track at speeds varying from fifteen or twenty to fifty or sixty miles an hour



A- A COMPOUND AIR BRAKE COMPRESSOR

B- CROSS SECTION OF A SINGLE STAGE AIR BRAKE COMPRESSOR

Fig. 18.—Westinghouse Air Brake

it will be clear that alert brains have enough to do to keep them properly separated from each other.

The New York Central has four tracks from New York to Buffalo—two for passenger trains going in opposite directions and the other two for freight trains going in opposite directions, and this makes things still safer. Besides these obvious improvements in railroading, there are two great inventions that permit trains to run close together at high speeds and with the least possible danger, and these are (1) the *quick-acting air-brake,* and (2) the *automatic block signal system.*

The Quick-acting Air-brake.—Did you ever stop to think that if it was not for the air-brake, which permits the engineer to control the speed of his train and stop it quickly if needs be, that trains could not be run at any great speed with safety? In the chapter ahead of this one I told you that it is the *air-compressor,* pictures of which are shown in Fig. 18, for the air-brakes that makes the chugging noise when the train has stopped.

The compressed air is stored in a large tank, or *main reservoir,* as it is called, placed on the engine, and in smaller tanks, or *auxiliary reservoirs,* one of which is placed under each car. Near each auxiliary reservoir is fixed a *brake cylinder* which has a piston in it, like that of the cylinder of the engine, and this piston is connected to a set of levers and rods; these, in turn, work the *brake shoes* and force them against the car wheels when the engineer lets air into the cylinder from the reservoir. It is this action of the compressed air that slows down the train.

A length of iron pipe leads from the main reservoir on the engine up into the cab, where it is screwed to a three-way cock, called a *triple valve,* and from this valve the pipe runs on under the tender and each car in turn, the connections between them being made with a rubber hose, the ends of which are fitted with couplings. In this way, then, a continuous air-tight pipe, called the *train line pipe,* is formed.

Under each car the pipe is connected with the brake cylinder, so that the air can be controlled by the triple valve. It is called a *triple valve* because it permits the engineer to do three things, and these are (1) to fill the auxiliary reservoir with compressed air from the main reservoir through the train line pipe; (2) to make the compressed air flow from the reservoirs into the brake cylinders of each car, and (3) to let the air out of the brake cylinders quickly, so that the brakes can be instantly released, and all of which the engineer does by simply moving the handle of the triple valve to different positions. With the quick-acting air-brake a train weighing one thousand tons and running at a speed of sixty miles an hour can be stopped in less than fifteen hundred feet. An air-brake line is shown in Fig. 19.

The First Block Signals.—Up to the time of Superintendent Minot's first experiment of telegraphing train orders, railroads were run on what was called the *time interval system,* that is, the ruling train had the right of one hour over the opposing train. The crews were, of course, anxious to get their train through, as, for example, witness Conductor Ayres, who once lost an hour at Pond Eddy. He took the switch and, after waiting ten minutes, as was the rule, and the opposing train not yet being within sight or hearing, he started a brakeman down the track with a flag and, giving him twenty minutes' lead, he followed on with his train.

A little west of Shohola he caught up with the tired flagman, who was taken aboard the train and a fresh man was started out with the flags, and this operation was repeated until the looked-for train was met at Calicoon, which station was thirty-four miles from Pond Eddy. Conductor Ayres used to say that he had flagged the entire length of the Delaware Division

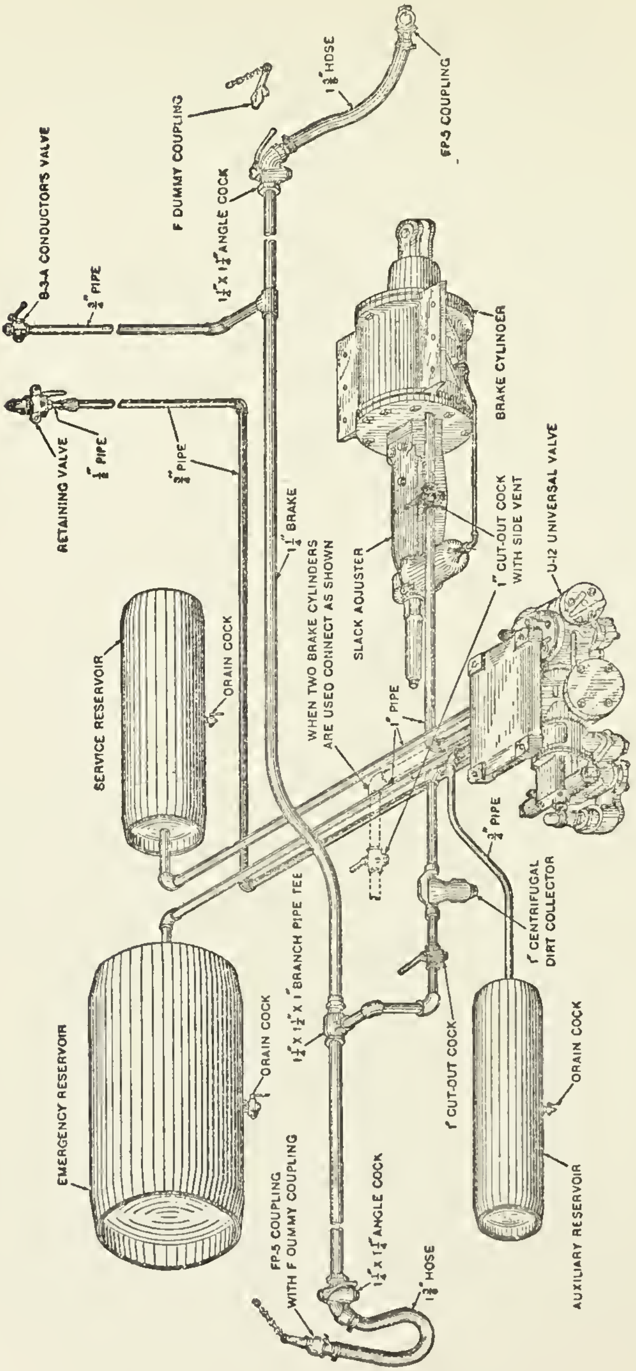


FIG. 19.—WESTINGHOUSE AIR BRAKE SYSTEM

more than once. And this was the first block signal system.

Interlocking Switches and Signals.—As you ride out of the railroad yards on the platform of an observation car you will see great rows of signal arms, or *semaphores,* as they are called, mounted on *gantries,* which are steel frames that are built above and over the tracks. These signals are moved automatically when certain switches are thrown by towermen in towers along the tracks, and their purpose is to let the engineer know whether or not the tracks they are taking are *clear* or are *blocked.*

These switches and signals form an *interlocking switch system,* which means that when the signalman throws a switch from the signal tower, all of the others related to it are automatically locked, and this prevents him from throwing a switch that would allow two trains to run onto the same track at the same time.

Automatic Block Signals.—After you get out of the yards and onto the broad steel highway, you will see a gantry or steel post every mile or so about twenty feet high with a semaphore, that is, a signal arm, for each track mounted on top of it, and each of these are pivoted so that it can point straight *up,* which means that the track ahead is *clear,* that is, that there is no other train between it and the next semaphore frame or post, or straight *out,* which means that the track is *blocked,* that is, that there is a train ahead between it and the next semaphore. The positions of the semaphores which show *clear* and *blocked* sections are pictured in Fig. 20.

The distance or section of track between any two semaphores is called a *block,* and the ends of the rails of each block are insulated from the ends of the rails of the next block. The rails of the track of each section, or block, are *bonded* together so that they will make a good electric circuit. Each semaphore arm is operated by a small electric motor which, in turn, is controlled by a relay magnet, and this is worked by an electric current flowing through the rails of each block, as shown in the wiring diagram in Fig. 21.

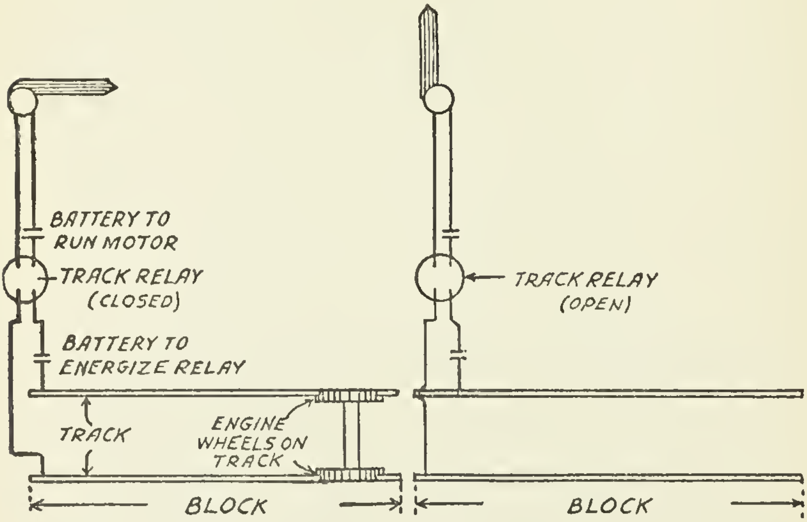
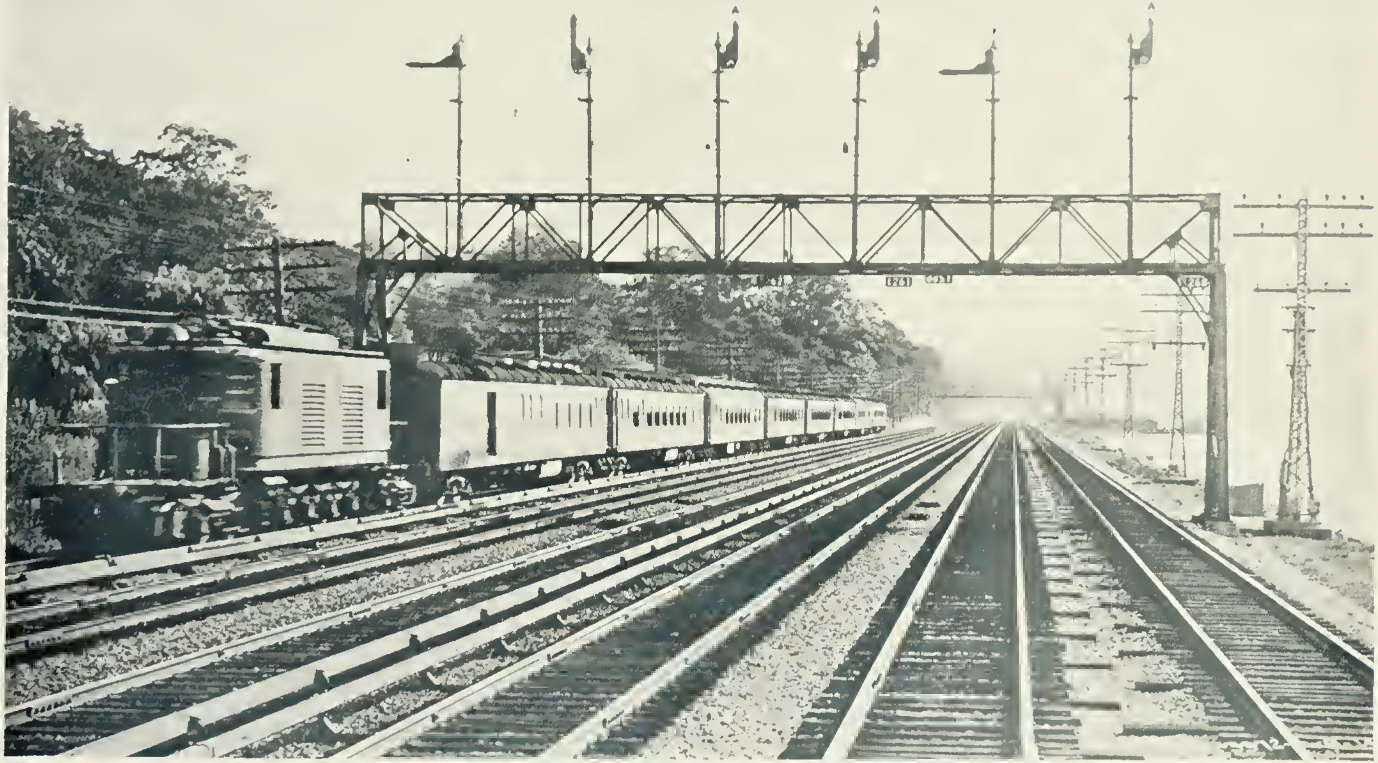


Fig. 21.—Diagram of Automatic Block Signal System

The battery and semaphore is at the front end of the *block,* as the section between any two semaphores is called. Now, when there is no train in the block the signal arm, which is weighted, is pulled up, that is, it stands in a vertical position (see Fig. 20 again), and so the engineer of a train that is in the block behind can see that the track is clear.

But when a train runs into a block the wheels and axles of the engine, since they form a single piece of steel, closes the track circuit and the current flowing



Courtesy New York Central Lines.

FIG. 20. THE AUTOMATIC BLOCK SIGNAL SYSTEM.

through it then operates the relay magnet, which in turn closes the motor circuit; when this is done the motor pulls the signal-arm down to the horizontal position and the engineer in the block behind sees that the semaphore is set against him and, hence, he knows that there is a train in the block ahead. At night a green light is used to indicate that the block is clear and a red light is used to indicate that there is a train in the block.

There is another kind of block signal system in general use, and this is known as the *enclosed disk* type. It is formed of a disk of red-coloured celluloid or silk, which is made to show in a large glass-covered opening, and this means that there is a train in the block. When the disk is thrown back it leaves the glass clear, and this means that there is no train in the block.

How Trains Are Run.—Everyone knows that the engine is run by the *engineer,* that the *fireman* shovels the coal to make the wheels go round, that the *conductor* takes up the tickets, and that the *brakeman* bawls out the stations. But these men who make up the *train crew* have other duties to perform besides the simple ones we are used to seeing them do. The engineer has to keep his train running to the *schedule,* that is, on the exact time that has been allotted to it, and, above all else, he must watch the semaphore signals and see to it that he doesn't run by any of them that may be set against him, and so have a rear-end collision. When the fireman isn't shovelling coal or regulating the oil supply to keep up the steam pressure he must look after the water in the boiler, pull the bell at grade crossings, and do numerous other little things. Most people seem to think that because the engineer runs the engine he is in charge of the running of the train, but far be it from such. It is the genial conductor who runs the train, and this is the way he came to do it.

One day in the spring of 1842, Conductor Ayres, of the Erie Railroad, rigged up a piece of string from his car to the engine, and tied a bit of wood to the end of it in the cab. He told Hamel, the engineer, that when he wanted to signal him he would pull the cord and so jiggle the stick. Hamel didn't like this idea of usurping his powers as the master of the train, and as soon as he pulled out he cut the cord and threw away the stick, and this operation he repeated several times.

Finally, Ayres got hot under the collar, and he told Hamel that if the stick was missing when they ran into Turners they would fight it out to a finish and the best man would run the train. At Turners the stick was missing, and Ayres took off his coat; instead of jumping off of his cab to meet him, the engineer got off on the other side. Ayres followed, but Hamel would not fight him, and from that day to this the conductor is in charge of running the train, and that is the reason he, as well as the engineer, is held responsible whenever anything happens to it. The bell took the place of the stick, and the bell-rope has been in use ever since, though it now works through the train line pipe of the air-brakes, as this does away with the necessity of coupling the ends of the rope of each car together when the train is made up.

In the raw old days of railroading the brakemen were what their name indicated them to be, for they were the fellows who screwed up the hand-brakes and stopped the train, but the air-brake has done away with all that sort of thing on passenger trains, and nearly all freight trains.

There are always three brakemen on a passenger train. The *head brakeman,* as he is called, rides in the car next to the engine, and sometimes in the cab of the engine. If the train should stop between two stations the head brakeman runs ahead of the train about three hundred feet with a red flag or a red lantern to make doubly sure that no other train coming from the opposite direction, if the road is a single track one, will run into his train.

The *rear brakeman* rides in the last car, and if the train should stop between stations he runs back of it about three hundred feet with a red flag or a red lantern, and stays there until his train is ready to pull out. While he is there, he fastens two thin *detonators,* or *torpedoes,* as they are called, which have lead strips fastened to their opposite sides, to the rails, and then when the engine of the next train comes along and runs over them the engineer will hear two light explosions, and this tells him that a train has stopped there and that he must proceed with caution. The *third brakeman* looks after the lighting and heating of the train; he also acts as a private secretary for the conductor, calls out stations, etc., and so you see that while a brakeman doesn't brake anything his life is not an idle one.

What Standard Time Is.—It takes about three hours for the sun to cross the United States from the Atlantic Coast to that of the Pacific. When the sun crosses *your* meridian, that is, an imaginary line running due north and south at the point where you are, it is *noon* by *sun-time* for you and everybody else on it, but it is *past* noon to those east of it, and it is not yet noon to those west of it.

For this reason, when it is noon in New York City it is only 11 A. M. in Chicago, St. Louis and New Orleans; 10 A. M. in Denver, Salt Lake City and El Paso, and 9 A. M. in Tacoma, Portland, San Francisco and Los Angeles, and this is the reason that every village, town and city, before the year of 1883, had its own *local time,* or *sun time.*

When folks made their little journeys on foot or with horses, the fact that there was a difference in time everywhere east and west didn't bother them at all, for they travelled too slow to notice the change, but when trains began to run over long-distance lines and at high speeds, then the trouble began. The traveller never knew the right time, for he couldn't set his watch by the local time at every station the train stopped and the railroad officials couldn't make a time-table to fit the ever-changing local time of the different places on their lines. The result was that the heads of the roads got up a system of their own that they called *railroad time,* and what with two kinds of time at the same time in the same place the poor traveller was in a mighty bad jam. Yes, he was, indeed.

Then some brainy old Professor Fixit invented what he called *standard time.* Now, to understand what standard time is you must know what a *standard meridian* is. The easiest way to explain this is to say that while any line running north and south is a meridian and a line running north and south fifteen degrees from another meridian, and which is a certain distance from some fixed place, is a standard meridian.

The *first, fixed, zero* on *prime meridian,* as it is variously called, runs through Greenwich, a suburb of London, England, and this line, which runs north and south clear around the earth, divides it into two equal parts east and west, just as the equator divides it into

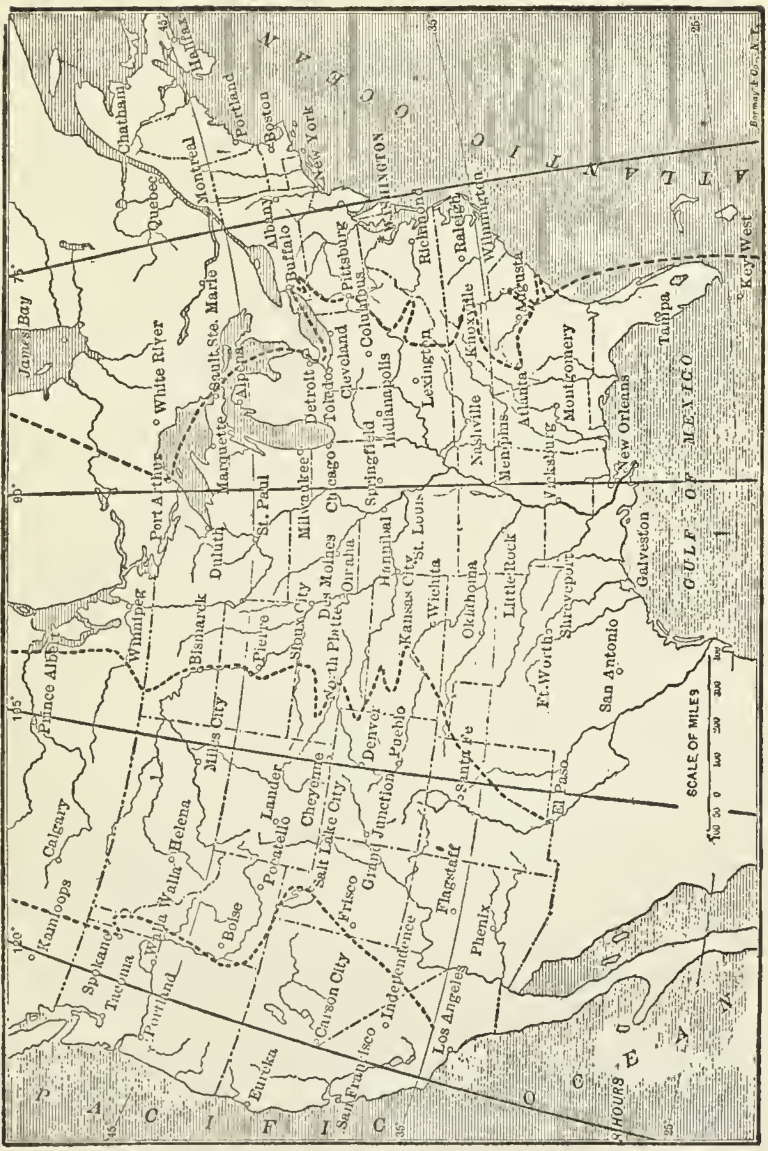


FIG. 22.—STANDARD MERIDIANS AND TIME BELTS IN UNITED STATES

two equal parts north and south. By the time the first standard meridian is reached in the United States the distance has run up to seventy-five degrees from Greenwich and it is, therefore, called the seventy-fifth meridian, and the time is, it follows, five hours slower than the time at Greenwich. The next standard meridian in the United States is the ninetieth, the following one the one hundred and fifth, and the last one the one hundred and twentieth.

These four standard meridians are shown on the map in Fig. 22, and you will also see that it is divided into *zones,* or *belts,* with the meridians running through the middle of them. These belts are not at all even, that is, they are not equal in area; further, each belt is an hour slower than the one east of it, which means that it takes about five hundred miles to make a difference of one hour, and, finally, that the time not only changes on the meridians but on both sides of it as far as the belt reaches.

So it is that the belt on either side of the seventy-fifth meridian is called *Eastern time,* on either side of the ninetieth meridian *Central time,* on either side of the one hundred and fifth meridian *Mountain time,* and on either side of the one hundred and twentieth meridian *Pacific time.* This is the reason why you have to set your watch one hour back at Buffalo, another hour back at Omaha, another hour back at Salt Lake City, and still another hour back at San Francisco when you are travelling west from New York, and set it one hour ahead at each of these places when travelling east from San Francisco. You will find a fuller explanation of Standard Time in Part II, Chapter VI.

VI

AT YOUR HOTEL

WHEN you reach the end of your trip and step off of the train you will be met by a flock of station porters ready and anxious to serve you. With your light outfit you won't need to be piloted by a porter, but it's worth the tip he's looking for to have him take your bag and show you to a taxi. You will remember his tip is a ten-cent piece, and take this little tip from me, if you ever have occasion to give anyone who serves you a tip, never make it less than ten cents or you may find him holding the coin to his eye, back in your own hand or rolling down the sidewalk headed for the gutter, by way of letting you know what he thinks of you.

Taking a Taxi.—Different prices are charged for cab service in different cities, but in every case the charges are fixed by law. If you take a taxi that is operated by the company which has a stand in the station, you are not apt to be overcharged, but if you get one outside of the station, where the driver is the owner, then watch your step, for he and the law are not likely to be in strict accord as to rates.

Taxicab service is charged for so much per quarter-mile, or per mile, and after the driver has registered the initial amount, usually for the first quarter of a mile, the meter will then show the amount in progressive steps of ten cents. As the meter is placed in such a position so that you can read the amount it registers easily and at all times, it follows that you will know just what you must pay the driver when you reach your destination.

When You Get There.—Now, let's suppose you are going to a hotel and that this is a first-class one. When your taxi pulls up in front of the door a door-man in livery will open the cab door for you and take your bag and other belongings, and these he will hand to a bell-boy, who in the slang of the day is known as a *bell-hop,* or *buttons,* but who is, in a high-toned hotel, called a *page,* and this sounds much better.

The door-man opens the door for you and, once inside, the bell-boy conducts you to the *room-clerk,* for in a big hotel there are all kinds of clerks, and each one is a specialist in his particular line of service. If you don't know the rates, you make the inquiry of the clerk, and he will suavely quote you the minimum for room alone and for room and bath. From these terms you can go on up as high as you like, for the limit is the sky.

At a first-class hotel never offer to pay your bill until you are ready to *check out,* that is, to leave, or until the end of a week, if you are staying that long or longer. You can go to a real hotel and stay a week or more on the strength of a hand-bag, and no reference to payment will be made, but the code is different at a second- or third-rate hotel. When you are checking out you go to the cashier's cage and ask for your bill and, learning what the amount is, you pay him, when he will receipt it, and it is a good scheme to keep it, at least for a while.

How Hotels Are Run.—Hotels are run on two different plans in this country, and these are (1) the *American plan,* which means that a fixed price is charged for your room and meals by the day or week, and (2) the *European plan,* that is, you pay for your room and meals separately. Hotels, however, on the American plan are few and far between at the present writing, as they have been practically superseded by those on the European plan, except in a few cases at resorts.

If you can find an American-plan hotel and are going to stop for a week or longer, it will be considerably cheaper than an European-plan hotel. But all of the larger and better hotels are run on the latter plan, and while you pay only for what you get, you pay enough, you bet, but I should hope to tell you that Turkish rugs, liveried servants, orchestras and all the other accoutrements of swelldom cost money, and it stands to reason that it is the guests who pay for them, and you are one of them.

As You Register.—When the room-clerk is assigning you a room, you write your name and address on a card or sheet that lays on the counter. The clerk gives your room key to a bell-boy or page, and he will escort you to the elevator, stand at attention until you enter, and then he enters after you a la my dear Gaston. After the elevator has shot up to your floor and stopped, you and he get off and, if you are in a really, truly swell hotel, you will see a woman floor clerk sitting at a desk, and she is in constant touch with the main office by means of a telephone and a pneumatic tube system.

You follow the boy along the wide corridor, your feet sinking into the velvet carpet at every step, and presently he unlocks the door and, with a salaam like an East Indian *Fakir,*[1] he ushers you into your room.

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[1] Pronounced *fa-keer*, like *fa* in *father.*

When he has done this little thing, he has done all that he can do for you, but does he make his exit? Oh, dear, no! He puts your bag and suitcase on a low stool made expressly for the purpose, to the end that they will not have to be put on the polished mahogany table, the damask bed-spread, or on something else where they shouldn't be put, for this is a real nice hotel, don't you know.

Have a dime ready and give it to the boy instanter, or he'll camp right there and rub the dust off of your bag, put the window curtains up and pull them down, and the while whistle cheerful-like. So, give him his percentage and let him go. Now, you may be one of several million travellers who do not believe in the tipping system, but if you don't tip him he'll do the tipping for you, and tip off all of the other bell-boys to the effect that you belong to the *genus piker,* and while they will serve you—for this is a first-class hotel, and they have to do it—they will do it in such a way you will be forced to wonder how a kind Creator lets them live.

But, if you want quick, efficient service, hand him a quarter or half-a-dollar, learn his number, and every time you have need for a boy, ask that he be sent you. Then don't give him, or any other page, anything more until you are checking out, or at the end of a week's stay. This is the best, cheapest and genteel way in the end. You will not have been at the hotel very long before you will find your trunks in your room with the straps unbuckled, and this means that you will please not forget the porter when you check out.

In every room there is a telephone, and this connects with a switchboard in the office. If, now, you want a page, a messenger, a maid, or anyone else, just telephone to the operator and make your wants known, when you will be served with neatness and dispatch. Should you wash your hands and go out, when you come back you will find a fresh cake of soap and a clean towel in the place of those you have used, and, as it is the maid, whom you are likely never to see until you are all ready to leave, that has done these nice things for you, please don't forget her.

Finding Your Way About.—In the lobby you will see a newsstand with all of the local papers on sale at a slight advance over the regular price, and often you will find your home papers on sale, too, provided you live in one of the large cities. Many of the big hotels have a bank, an audit company, a broker's office, a theatre ticket office, a photographic studio, a notary public, Turkish and other baths, hair-dressing rooms, stenographers, manicures, chiropodists, valets, maids, trunk packers, and what have you? And, bless my old soul, if I didn't nearly forget the blonde flower-girl. Say a few pleasant words to the little girl who earns her daily bread by the very agreeable occupation of selling flowers, and buy a carnation of her every day for your button-hole.

You and the Manicure Girl.—The barber shop is usually *down-stairs to your right* in most hotels, and there you can get a shave, hair-cut, shampoo, and your face massaged, your nails manicured and your shoes shined all at the same time. Or, if you prefer, you can have the next to the last-named item done over at the manicure's table, where you can see how the work progresses.

Have the manicurist tell you where the best shows in town are playing, and, you can take it from me, she has seen them all. Engage her in some small patter, if you care to, but you don't need to tell her that your dad is a millionaire soap manufacturer back east, an operator in the wheat pit in the middle west, or a railroad magnate on the Pacific Coast; that you have just bought a Rolls-Royce car and that you've placed an order with the Curtiss Company for an airplane with which you intend to make a hop across the Atlantic next summer.

Better just say you are a poor student working your way through college, and that your maiden aunt, who is a kind-hearted philanthropist, has *staked* you to a little vacation. This angle of attack will be much safer from a financial point of view, and it won't take her so long to *did* your nails as my friend of bygone days, Billy Kirk, used to say. Pay her the regular *tariff,* as the price is called, and give her a quarter tip for the verbal entertainment. If she tells you about sending a *kid* sister to Vassar and incidentally mentions that she is the sole support of her old mother you might stretch the tip to half-a-dollar if you think she's pretty enough to deserve it.

A Word About Dining.—After these mild but stimulating adventures you will be ready for *luncheon,* and don't call it *lunch.* In every big hotel there are three or four different kinds of dining-rooms, and though it may seem curious, they are all designed and operated for the same purpose, and that is to provide nourishment for the physical man and profit for the owners. If you want to dine inexpensively (by which I mean cheaply) you can repair to the *Coffee Shop,* as this type of restaurant is called, and which innovation nearly all first-class hotels have put in.

You can get a quiet, unobtrusive and very little more expensive luncheon in the *Palm Garden, India*

Room or other like fanciful-named restaurant, where business men are wont to dine, and you can go into these dining-rooms at any time of the day or night with a sack suit on and still not offend the proprieties. The main dining-rooms are more discriminating, hence more exclusive and, double hence, considerably more expensive. You can go to breakfast and luncheon in a sack suit, but you must wear a tuxedo for dinner. A full dress suit can, of course, be worn, but since the war it is chiefly used on strictly formal occasions.

The Head Waiter and His Aids.—When you enter the main dining-room you will come face to face with that important personage called the *head waiter.* He may be black or Irish, white or Italian, Baptist or Democrat, but whatever his color, race, creed or politics, you may be sure he is a dandy at his business, even though his business isn't much. He will bow gracefully, do an about-face, walk ahead of you like a drum-major leading a silver cornet band, and pull out a chair from the table; you then sit down, but don't, on your life, touch the chair with your hands; all you need to do is to sit down and he'll push the chair under you at an instant timed with mathematical precision, and you'll find yourself seated at the table just as a gentleman born to the purple should be.

When you are dining *a la carte,* the waiter will generally place an order-pad and pencil on the table, together with the menu-card, and you then write down your order just as you did in the dining-car, but if you are dining *table d'hôte* the waiter will give you a menu-card so that you may choose the kind of soup, fish, entree, roast and dessert you want, and he will then serve you with one course after another from grape fruit to *café noir, i. e.,* black coffee. When you have finished dining well, the waiter will present you with your bill and you pay him the amount it calls for, unless you have previously arranged with the management to charge your restaurant bills, in which case you sign the bill or slip and, in either case, leave his tip on the table.

If you should be so fortunate as to be a guest on the American plan, the waiter has nothing to do with the bill, and it is customary to do your tipping in a little different fashion, and that is to say, if you are stopping at a hotel for several weeks, a nice way is to place the sum total of the tips you would have given him during the week under the edge of your plate after you have breakfasted Sunday morning.

The Gentle Art of Tipping.—Although tipping is supposed to be a gratuitous offering of appreciation from the parting guest to the employees who have served him well, it is often better to split your tip in the case of the waiter and give him half of it the first meal and the other half when you are leaving, that is, if you leave not longer than a week later, for this is a commercial age, and the way he figures it out is that a feathered vertebrate in the hand is worth a whole flock of them in the foliage.

Now, you may say that all of this tipping business is unfair and all wrong, and I heartily agree with you it is a confounded nuisance which ought to be suppressed, and this is especially true when you are travelling on a shoestring, but if you are not so hampered by the lack of funds it becomes a perfectly plausible and even legitimate institution, for it gets you service that you couldn't begin to get if the hotel owners and railroad magnates paid their help twice as much in wages and—there you are!

Again, it makes the help take a mighty kindly interest in you and feel friendly toward you, and the best part of the tipping system is that nine times out of ten it really goes toward the support of aged parents, a sick wife, or to buy shoes for the baby. So, in the end, you not only help yourself, but you play the part of the good Samaritan to boot.

Should you want a taxi to go to the theatre or some other place, you can telephone from your room for one or order it at the starter's desk, which is located near the door in the lobby of the hotel. He will have one at the door for you in a minute or two, or as soon as one is available. You don't have to tip the starter unless you want to, or anyone else in the service except the pages, waiters, maids, porters, and a few others around the hotel.

The Act of Paging.—Should some one call to see you when you are at the hotel, he will hand his card to the clerk in charge of the pneumatic tube system on the main floor and he will shoot it up to the floor clerk, who will take it to your room. If you are not in she will send it back to the tube clerk and he will give it to a page, who will *page you.* To page you means that the boy will go through all of the public rooms of the hotel and cry out at short intervals, *William Henry Mudd,* or *Mr. Mudd,* if your name happens to be Mudd. This is the act from which the bell-boy derives the very much more dignified name of *page.*[3]

Now, when a bell-boy hears himself called a *page* he gets a wireless message right from his innermost soul that you are a real fellow, and you will accrue in the good feeling by getting better service.

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[3] Originally a *page* was a boy who acted as the personal attendant of a knight and his mistress, and who had to serve in this capacity for seven or more years as a preliminary training for knighthood.

Checking Out of Your Hotel.—A day or so before you intend to leave the hotel, you should have the head porter get your railroad and Pullman tickets and check your baggage, which he will do so that it will be delivered right to your own home if you wish it. You don't need to be afraid to trust him with whatever the amount of money you give him to cover their cost, for he is honest—and, besides, the chances are he has more of it planted away than you have, for many of them own apartment houses and business blocks, but you don't need to slight him, when it comes to a tip, on that account.

An hour or so before you are going to leave, inform your floor clerk or the room clerk, who will in turn notify the bookkeeper, and he will then make out your bill and hand it to the cashier. Then, just before you go, step to the cashier's cage and ask for it. You can check over the items charged up against you, but it is dollars to doughnuts that it is correct, for there are no *catches* worked by the employees of a first-class hotel. The starter has your taxi at the door; the page will lead the way with your luggage, and he and the doorman will escort you to the vehicle and see that you and your bags are safely ensconced within. You hand each of them a small gratuity, the door is closed and—you are gone till the next time.

VII

SEEING THE SIGHTS

WHILE riding on a good train or stopping at a nice hotel are in themselves a joy while they last, still, the idea of most folks who travel for pleasure is to see the sights. Of course, wherever you go there are sights to be seen, whether you are sojourning in a big city, camping in the wilderness, lost in a desert, or shipwrecked at sea, and you should see everything as you go along, for you may not pass that way again.

The Sights of a Big City.—Now, let us take the sights of a big city first. You don't need a guide-book in this country to look them up in, for the managements of hotels, trolley lines and sightseeing busses usually have a printed list of all that is worth while to see. If, however, you want historical detail and statistical data you should read up on the places that interest you before you visit them, and this is a mighty excellent way to do. But if you do, then you are an exception to the general run of sightseeing visitors to cities, as they see first and read up afterward, if they read up at all.

There are several ways to see the sights in and around a big city. The first way is to use mare's shanks, or, in other words, to walk, and this is very good if you have lots of time and want to get something more than a passing glimpse of them. Then, another way is to take a trolley-car. The chief trouble with this way is that it takes too much time, for if you do not know the city, you have to make inquiries along the line, and street-cars, especially closed ones, are hard to see out of.

The best and most satisfactory way, and one that will not cost you any more in the end, is to take a *sightseeing bus,* as shown in Fig. 23. This is a large motor-car with seats that run up in steps like the seats in the balcony of a theatre and which holds twenty or more people. Each bus has its driver and a guide, who imparts a thumb-nail history garnished with a wealth of more or less relevant information concerning the sights along the way, and this he dispenses through a megaphone so that all who ride may hear.

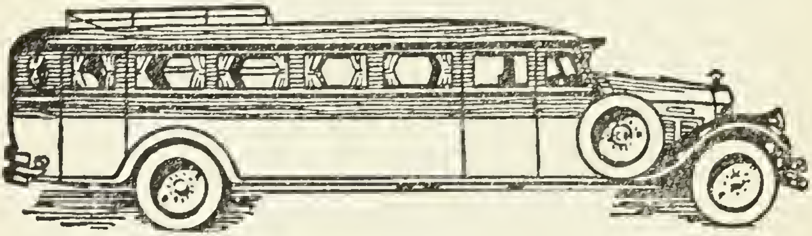

Fig. 23.—Sightseeing Bus

There is another and a much more dignified and, it follows, expensive way to see the sights of a city. You can hire a good motor-car of an auto-renting agency, and they will furnish a guide to go along with you. By seeing a city this way you will enjoy an exclusive, little trip all by your lonesome, but you can see better from the high-up seat in a bus, brush shoulders with people who are bent on the same mission as yourself, and have a lot of fun. So, my advice to you is to be democratic and see the city with the common folks.

The exception to the above suggestion is found in the smaller cities like Niagara Falls, Salt Lake City and Colorado Springs. For a few dollars you can hire a motor-car and the driver, who is generally the owner and also the guide, will take you around the Falls (not over them) among the beehives of Brigham Young, or drive you through the Garden of the Gods and on over to Manitou, where a cog railroad will carry you to the summit of Pike's Peak.

Seeing the Natural Wonders.—The Hudson River.—This is our most picturesque river, and it has been called the *Rhine of America,* but in my private opinion (publicly expressed) it far surpasses the Rhine in scenic beauty. It was discovered by Verrazano, an Italian navigator, in 1524, but it was not explored until 1809, when Henry Hudson, for whom it was named, sailed up it as far as it was navigable. The Indian name for it was *Shatemuc,* but the early colonists called it the *North River,* as the Delaware was then known as the *South River.*

The Hudson has its headwaters in the Adirondack Mountains and it then flows almost due south for one hundred and fifty miles, when it empties into the Atlantic Ocean, through New York Bay. It is fed by a number of mountain lakes and by several streams and rivers, the largest of which is the Mohawk. It is navigable as far as Troy, which is just below the Mohawk.

Leaving Albany on one of the day boats you will presently see the historic Catskill Mountains on the right, and then you will come to the Highlands, which are about eleven hundred feet high, and these skirt the shore for some twenty miles. When you get to within twenty miles of the mouth of the river the *palisades,* which are an unbroken line of sheer cliffs that are formed of trap-rock[1] loom up on the west bank, and they rise straight from the water's edge to heights of from three hundred and fifty to five hundred and fifty feet.

Added to these scenic marvels are beautiful homes on both banks of the river all the way from New York to Albany, and many of these are of great historical, literary and artistic interest. For instance, there is Washington Irving's home, *Sunny Side,* which is at Irvington, just a little south of Tarrytown, and *Cro' Nest,* where Joseph Rodman Drake wrote his poem, the *Culprit Fay.* At West Park is where John Burroughs and Ernest Ingersoll, the naturalists, studied bird life, while at Cornwall-on-the-Hudson, N. P. Willis and E. P. Roe lived and wrote their books.

As you reach New York the scene you will see is so animated and stupendous it will always remain indelibly impressed upon your mind. Boats of every description from little tugs to great liners move with incredible swiftness forth and back across and up and down the river while the sky-line of New York is a spectacular sight which once seen you will never forget, even if you should live a thousand years.

Niagara Falls.—The Iroquois Indians called these great falls *Jorakace,* which meant *thundering water,* and they called it rightly. The name *Niagara* was given to it by geologists because it consists of rocks, mostly limestones, which are of the Niagara epoch, a division of the Upper Silurian period. To be thrilled as you have never been before you will need nothing more than a pair of eyes and ears and a brain and then stand on the brink of the Falls and watch the gigantic masses of water as they flow over the escarpment, but to fully appreciate the majesty of them you should know a little about how they were formed.

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[1] This is a dark-colored, fine-grained igneous rock.

First of all, Lake Erie is about three hundred feet above that of Lake Ontario, and the Niagara River flows from the former to the latter over a high flat country called a *plateau*. In the beginning of things it reached the bluff or escarpment which was directly on Lake Ontario, and over which it fell into the waters of it. The river is thirty-three miles long, and the falls are now seven miles back from Lake Ontario, where they originally were. It is estimated that it has taken about 25,000 years for the water to wear away the limestone over which it flowed and to cut the narrow and deep gorge through it back to where the falls are now.

There are two falls at Niagara, and these are the *American Falls* and the *Horseshoe Falls*. The first-named are 1,060 feet wide and 167 feet in height. Only a thin sheet of water falls over it, the exact amount being only 4.83 per cent of the total that goes over both of them. The Horseshoe Falls have a width, when measured along the curve, of 2,950 feet and a height of 158 feet. The amount of water that falls over it is 95.17 per cent of the total, and this amounts to 280,000 cubic feet a second, or about 500,000 tons per minute.

This gigantic mass of water which falls to the gorge below has worn away a basin that is about 150 feet deep and 1½ miles long. The depth of the water in the basin is such that its surface is quite smooth so that a little steamer, called the *Maid of the Mist*, can sail on it and get very close to the cataract. The *Whirlpool Rapids*, below the basin, is where the channel becomes shallow and this causes the water to swirl and eddy with rapid and unceasing violence, and it is a sight that takes one's breath away.

The first cantilever[2] bridge ever built, and which is 910 feet long, connects the United States and the Canadian shores. It spans the gorge a little above the Whirlpool Rapids. A steel arch railroad bridge with a vehicular roadway under the track spans the gorge some distance farther down from the cantilever bridge. Niagara Falls is a great mecca for honeymooners, but my advice to you is, don't wait until you are married, but see them the first chance you get.

Yellowstone Park.—This is a government reservation located in the northwest corner of Wyoming and laps over into Montana and Idaho. It contains 3,575 square miles and was set aside by Congress for "a pleasure ground and a game preserve;" it is, however, a great deal more than this modest description would lead the unknowing to suspect, for it is not only one of the six wonders of America but of the world, for nowhere else are to be found so many strange and outstanding marvels of nature compressed into so small a space.

The Park, which is a part of a volcanic region, has a central plateau that is formed of lava and in some places this is 2,000 feet thick. Running through the Park are two ranges of mountains, the Shoshone (pronounced *Sho-shon'-e*) and the Absaroka (pronounced *Ab-sa-ro'-ka*) range, the highest peak of which is Index Mountain, and this is 11,740 feet, while surrounding it are over twenty snow-covered peaks, each of them having a height of 10,000 feet or more.

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[2] Beams or trusses that project from a pair of piers toward each other and join each other to form a span.

There are numerous rivers in the Park, the chief ones being the Yellowstone and the Snake Rivers. The Grand Cañon[3] (pronounced *can'-yon*) of the Yellowstone is eleven miles long and has a wall on one side whose height of 2,000 feet, while gigantic towers of rock reach skyward on the other side of it. A few miles from the Grand Cañon is Sulphur Mountain, a mound that is formed of crystallized sulphur, and at its base are numerous hot springs. There are also many lakes and Yellowstone Lake, which is near the southeastern corner of the Park, is the largest and has a shore length of some three hundred miles or more.

The chief wonders of this veritable wonderland are the far-famed geysers and hot springs and, all told, there are about one hundred of them. In the Upper Basin are located the largest and most active geysers, and of these the best known is Old Faithful. This geyser is so called because it discharges steam and water regularly every sixty-four minutes, and this time period between its activities has not changed within the memory of the oldest living inhabitant. The column of water that it throws up is six feet in diameter, and this rises to a height of one hundred to one hundred and fifty feet in the air and lasts each time about fifteen minutes. There are three geysers in the valley of the Fire Hole River, and these are some 7,000 feet above the level of the sea.

Hell's Half Acre is in the Middle Fire Hole. It is a deep, steaming pit, and you do not need to use your imagination to believe it is a bit of the infernal regions that has broken through the crust of the earth. A little farther along is a lake whose boiling waters are as blue as an Italian sky. Then there is a hole filled with variously colored clays that boil continuously and which change their hues in a most diabolical way, and this is called the Devil's Paint Pot.

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[3] Cañon and canyon mean one and the same thing and, hence, are used interchangeably. The name comes from the Spanish word *cañon,* which means *hollow.*

In the extreme northern part of the Park are the Mammoth Hot Springs, and these are near Gardiner, one of the gateways to it. The deposits of limestone that are left by the hot water have built up beautiful terraces. There are several caves in the Park, and these are enriched with hundreds of stalagmites and stalactites. The government has the largest herd of buffalo to be found in America quartered in the Park, and there are plenty of tame bears and other animals to be seen.

Yosemite Valley.—Yosemite (pronounced *Yo-sem'-i-te*) is an Indian word that means *grizzly,* and when the first white men came into the Valley in 1851, they found an Indian chief there whose name was Yosemite, and so they forthwith named the Valley after him.

The Valley is about one hundred and fifty miles southeast of San Francisco on the western side of the Sierra Nevada range. It is in the neighborhood of half-a-mile wide and six miles long and the *floor* of it, as the level part is called, is nearly a mile below the surface of the land above it. The Yosemite Valley is a ravine, a gorge and a cañon all rolled into one, for it has steep, rocky walls and high steep slopes with narrow bottoms. The whole Valley was cut out of solid granite by the action of a mighty glacier that flowed through it.

Many of the rocks stand alone, and these have been given special names. Thus one rock that has a height of 7,042 feet is called El Capitan; two others on the other side of it are known as Bridal Veil Rock and Cathedral Rock. A triple peaked rock is termed Three Sisters, others are Sentinal Dome, Liberty Cap and the Spies, and these range from 4,630 to 8,117 feet in height.

There are several very high falls in the Valley, the chief ones of which are the Vernal Falls, and this has a drop of about 400 feet, Nevada Falls with a drop of 600 feet, and the famous Bridal Veil Falls, which drops from a bluff that is 630 feet high, then falls in a succession of cascades that carries it down 300 feet more, and this makes the total length of its descent a little more than 900 feet. Then, there is the falls known as the Virgin's Tears, and this has a drop of 1,000 feet, but this is outdone by the Yosemite Falls, which has a sheer drop of 1,500 feet, then flows over a succession of cascades for another 600 feet or so, and then it makes a final drop of 400 feet.

There are many features of great interest in and around the Yosemite Valley, and among these is the Mariposa grove of big trees—trees that were growing when Moses was a boy. From Glacier Point, which is 7,214 feet above the floor, a most wonderful and inspiring view can be had of the whole Valley.

Grand Canyon of the Colorado.—The Colorado River is about 1,450 miles long and has its headwaters in Colorado, where it flows through Utah and the northern part of Arizona. The canyon of the Colorado is two hundred and seventeen miles long, and that part of it which is called the *Grand Canyon* is more than a mile deep, eight to fifteen miles wide and about two hundred miles long.

The Colorado River, which flows over a high plateau, has cut its way through the rocks, the lower stratum of which was formed in the very beginning of geologic time. In these millions of years it has sculptured a great variety of cliffs and buttes and these are brilliantly colored in white and yellow, and red and green, the whole forming "the most sublime of all earthly spectacles," and then some.

The explorer, S. L. de Cardenas, and a dozen of his companions were led to the Grand Canyon in 1541 by the Hopi Indians, and they were the first white men who ever gazed upon it. In 1869, more than three centuries later, Major J. W. Powell set out, together with his men, in row-boats, and after many exciting adventures he successfully navigated it to its mouth.

The Atchison, Topeka and Santa Fé Railroad has run a branch line from the town of Williams to a point on the rim of the canyon called El Tovar, and from this vantage point you can see the stupendous work that has been done by the erosion of the river. Various trails have been made along the rim, as the edge of the cliffs is called, and also down the slopes to the river, and the best known of these is called Bright Angel Trail. To miss seeing the Grand Canyon of the Colorado means that you have not by any means seen America, and so hie yourself hitherward and take a look at it before you think again of the sights that Europe holds in store for you.

Mammoth Cave.—This is the largest cave in the world that has yet been discovered, and *Colossal Cavern,* which is near by, bids fair to equal it. These caves or caverns are about eighty-five miles southwest of Louisville, Kentucky, and to reach them you have to change cars from the main line of the Louisville and Nashville Railroad, at Glasgow Junction and take a short branch line to them.

Long before the paleface came, saw and conquered Kentucky, the Indians knew Mammoth Cave and often used it as a place to hold their pow-wows. Just when it was discovered by the white man or who he was is not known. Formerly it was believed that a man named Hutchinson, who was a hunter, had found it in 1806, but later investigations of the records of the country in which the cave is located show that the entrance to it was used as a landmark as early as 1797.

Mammoth Cave first came to public notice during the War of 1812, and this was due to the fact that it contained huge deposits of saltpeter, which was used for making gunpowder. The marks of the wheels of the wagons which carried the mineral out of the cave can still be clearly seen.

Mammoth Cave has an approximate diameter of ten feet, and it has about one hundred miles of passageways which have been explored. The passages are arranged in five different layers or tiers, one above the other and in, along and connecting these are rooms, domes, pits and rivers. The *Main Cave,* as it is called, has a width of from forty to one hundred and twenty-five feet, and at one point this is expanded in size so that it forms an oval room which is one hundred and twenty-five feet high, two hundred and eighty-seven feet wide and five hundred and forty-one feet long, and this is called *The Temple.*

Another enlargement of the passage is called the *Star Chamber,* because its lofty ceiling is formed of black oxide of manganese and in this flakes of white crystals of gypsum are embedded. Now, when a light is made in the chamber the ceiling takes on the appearance of the bowl of the sky studded with twinkling stars.

As you move along the lower passages you will come to various vertical shafts, and these are *domes* as you look up in them, while on looking down in them from the upper passages they become *pits*. The largest of these are Mammoth Dome and Gosin's Dome, while the Bottomless Pit and the Maelstrom are the deepest of these shafts. It used to be supposed that the Maelstrom marked the end of the great cave, but more recent explorers tell us that there are wide and long passages far beyond this point.

Sink-holes, as they are called, in the pits and chasms drain off the water as it seeps into the cave, and this forms streams and rivers in other and lower parts of it. In turn, these finally flow into the Green River, which is on the surface of the ground outside of the cave. Echo River is the largest of these bodies of water, and it is from the multiple echoes that are produced by sounds reverberating from the sides of the cave that it gets its name. You can get in a boat and have a guide row you along the course, when you can sing a song and hear the words and notes repeated a dozen times.

If you are interested in curious living things you will find fish in these waters that have no eyes, and then there are blind flies, crickets, beetles, spiders and crawfish.

The Colossal Cavern.—The entrance to this great cave is only half-a-mile from that of Mammoth Cave, and while it seems strange it is nevertheless a fact that it was not discovered until 1895. It is believed to be as large as Mammoth Cave and many of its wonders are on a still more magnificent scale than like ones of the latter. It is the present author's opinion that the two caves are, in all likelihood, connected, but if this is so the point of juncture has remained, thus far, undiscovered.

One of its chief features is Colossal Dome, which is one hundred and thirty-five feet high, and while it is not the largest, it is the best proportioned of those which have been found. Another feature is Vaughn's Dome, and this is seventy-eight feet in height and is reached through a miniature chasm that is about three hundred feet in length. Finally, there are the Twin Pits, which are sixty-five feet deep, the Lover's Gallery, which is four hundred feet long, the Ruins of Carthage, which is likewise four hundred feet long, and other spectacular attractions too numerous to mention.

PART II

DO EUROPE AFTER

I

GOING ABROAD

AFTER you have seen America there will come a time when you will begin to feel a little queer around the gills, and this means that you have again contracted that awful disease which is known to horizon-chasers as *travelitis*. This strange malady, for which there seems to be no relief except to keep on the go, is primarily caused by an invisible germ whose scientific name is the *bacterium travelitis*, but which is commonly called the *travel bug*, and one of the first symptoms of it is shown in Fig. 24.

Fig. 24.—The Travel Bug at Work

About the Travel Bug.—It doesn't make any difference whether you live in a mansion on Fifth Avenue,[1] on the Lake Shore Drive,[2] or on Sutro Heights,[3] or in some humble shack in Squedunk, in Mechanicsville, or in Lovelock, once that the travel bug incubates in your system you'll never stop a moment to think about seasickness, or *mal-de-mer,* as the French call it, or the many inconveniences you will have to put up with overseas. All you will know is that the germ is working overtime, silently but pertinaciously, and from the moment you get it the folks at home will also be aware of it, for they will have a *travelogue* served up to them for breakfast, dinner and supper, and your friends will sadly shake their heads and say, " A little travel hath made him glad."

No, doctors can't cure you, Christian Science won't help you, and even being in love won't kill the germ. No, indeed! I have had the same travel bug with me for nigh onto fifty years, and the older I grow the stronger it gets. As I have mentioned before, there's only one way to put it to sleep, and that is to book passage on some good ship and sail away to foreign lands. To go to Europe and see the sights there—the countries, the peoples, the ancient and modern architecture and, finally, the art treasures, is not only a liberal education in itself but it will add mightily to your breadth of view and give you a better grip on the problems of life.

Some Short Sea Voyages.—While a round voyage to Europe and travel in European countries is not at all expensive if you are willing to go *second* or *third cabin,* still, if you feel you cannot afford it, you can make a shorter sea trip at a very small cost, and one that will take you to a foreign land, but, of course, this will only whet your appetite for a longer voyage and a broader outlook.

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[1] In New York.
[2] In Chicago.
[3] In San Francisco.

As an example, should you live on or near the Atlantic seaboard, you can go to the Bermuda Islands, which are only some seven hundred nautical miles[4] from New York, and you can book a round voyage, including a stay of a week's time, for as small an amount as one hundred and fifty dollars. When you get to these little dream islands you might as well be in England, as far as the speech and money are concerned, for they are under British rule and you will have to think in terms of *£. s. d.,* that is, pounds, shillings and pence, instead of in easy American dollars and cents. And what with the fine old Anglo-Saxon names of the islanders and the red-coated Tommy Atkins[5] stationed there, it is all very English, don't you know.

You can sail to Cuba from New York or from New Orleans, as well as to other islands of the West Indies. Since Havana is eleven hundred and sixty-six miles from New York, the fare is, naturally, higher than it is to Bermuda, and living is very much higher in the former than in the latter place. From Havana and from New Orleans you can book a passage to Vera Cruz, on the coast of the Gulf of Mexico, and you will be in the land of the *tamale, mañana* and insurrection. An hour's ride from Vera Cruz, on the railroad, will bring you to the City of Mexico. Of course, you know that in Cuba and in Mexico the Spanish language is spoken, but you will have no difficulty in making your wants known and in seeing the sights, for there are many English-speaking people in both places. A map of these short sea routes is shown in Fig. 25.

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[4] A nautical mile is, according to the United States Coast Survey, 6,080.20 feet.

[5] Any white, regular soldier of the British Army.

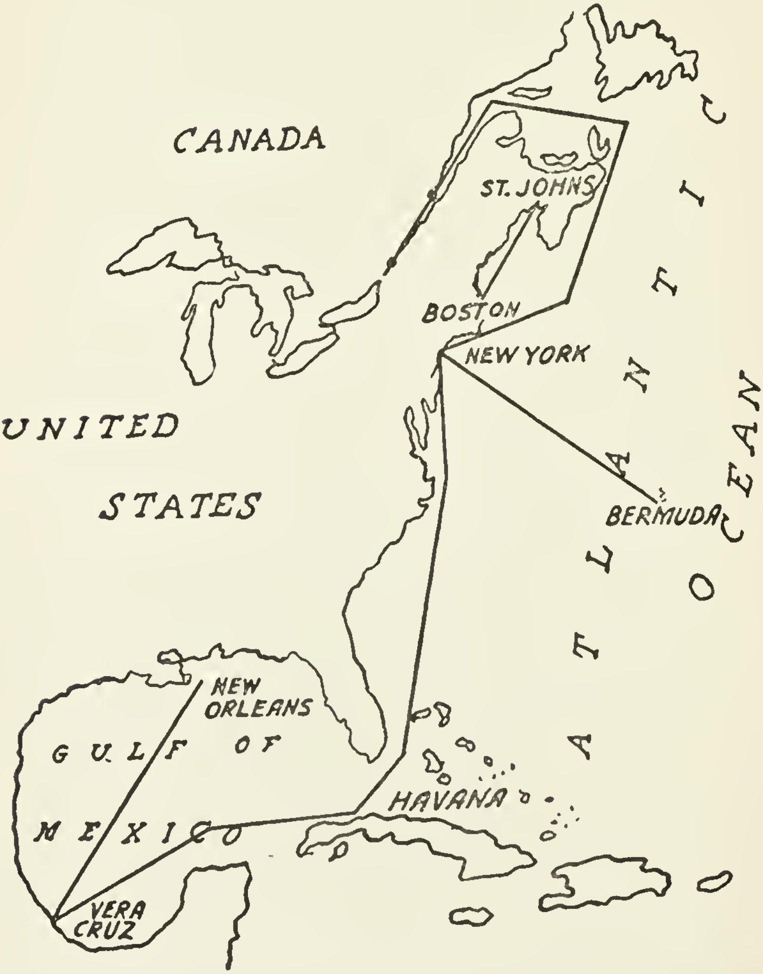

Fig. 25.—Map of Short Distance Atlantic Coast Voyages

You can make a fine voyage from San Francisco to the Hawaiian Islands, two thousand and ninety-one nautical miles to the southwest. While the islands are under the protectorate of the United States, there is enough left of the old native Kanaka life and the new Japanese invasion to give them a decidedly foreign aspect. To be sure, the great adventure is to go to Europe or to the Orient, or, still better, to circle the round world, and so be a real globe-trotter, but whatever you do—go! A map of the Pacific Coast short sea routes is shown in Fig. 26, of the various routes to Europe in Fig. 27, and those to the Orient in Fig. 28.

When to Go Abroad.—While a visit to Bermuda, the West Indies, Mexico or the Hawaiian Islands is most enjoyable when that part of the United States north of the Mason and Dixon line is held fast in the grip of winter, the most pleasant time to do Europe and the Orient is in the spring or fall. Springtime in Japan is beautiful, for then the cherry blossoms and wisteria are in full bloom, while in the autumn the chrysanthemums are gorgeous.

About Your Outfit.—For the Boy and Girl.—When you are going abroad your outfit should be a little different from the one I described for a trip by rail in the first chapter of this book. Your clothing will be about the same, but you ought to take two suitcases instead of a bag and a suitcase. The reason for this is not only because a suitcase will hold considerably more than a bag, but because the railway coaches, or *carriages,* as they are called over there, are made differently from those we have on this side, and the luggage is piled up in racks over the seats, so that a suitcase only takes up about half as much vertical space as a bag.

And, as a matter of fact, a case is easier to carry

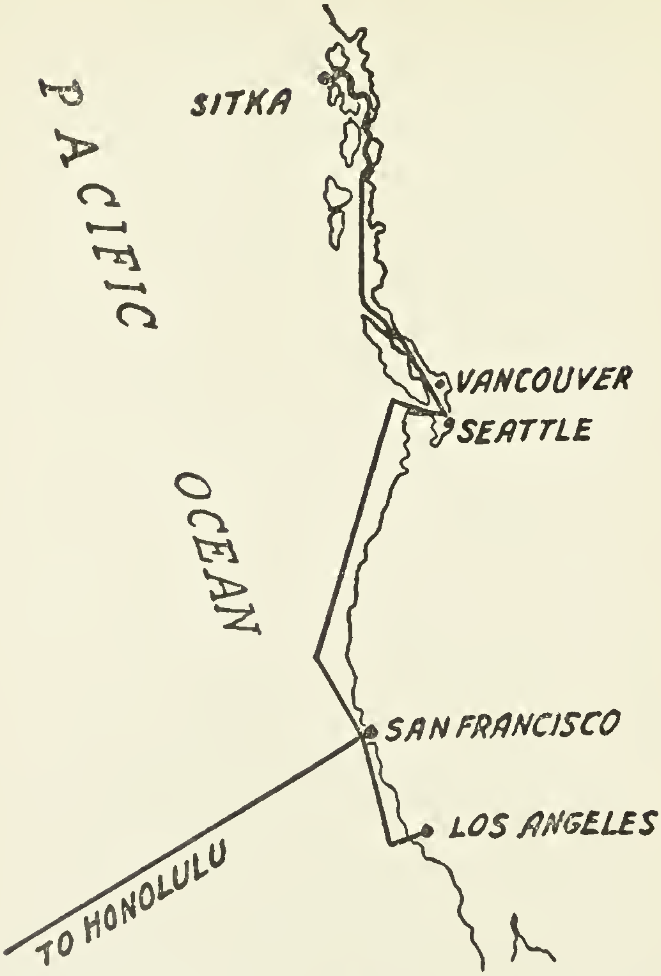

Fig. 26.—Map of Short Distance Pacific Coast Voyages

than a bag. An *extension suitcase* is a good kind to have for one of them, as one side of it is fitted with a bellows arrangement, and this makes its space adjustable within certain limits.

Hundreds of lads and lassies leave these fair shores of ours for a trip through Europe and get along exceeding well without a trunk, and certainly you can do the same. In moving about, a trunk is not only a great bother, for you have to look after it constantly, but the expense of transporting it soon mounts up to a considerable figure.

About Steamer Trunks.—If you feel you have to take a trunk, then, instead of a regulation one, you must have a *steamer trunk,* that is, if you want it in your stateroom. If you use a regular sized trunk it will be put in the hold of the ship and, while you can get at it during certain hours of the day by asking the steward in charge of the baggage, it will put you to a lot of trouble. A steamer trunk is made so that it will go under the berth of your stateroom, for, while it is about as wide and as long as an ordinary trunk, it is only fourteen inches high.

Now, here is a point you ought to know about concerning steamer trunks. Naturally, you want your cases and trunks to match up with your own appearance, and that is to be in good taste and up-to-the-minute. A wardrobe steamer trunk has just that kind of a look to it, and is strictly the thing if you are going first-class or have a stateroom all to yourself. If, however, you are travelling second-class and sharing your room with someone else, you will find it a decided inconvenience, and for this reason: The rooms are generally so small that there is no extra space for a trunk when it is not in use, except under the berth, and the result is that you will have to pull it out and then stand it on end to open it, and, oppositely, when you have closed it you will have to lay it down to push it under the berth. So, unless you are going to have a room alone, or share a large

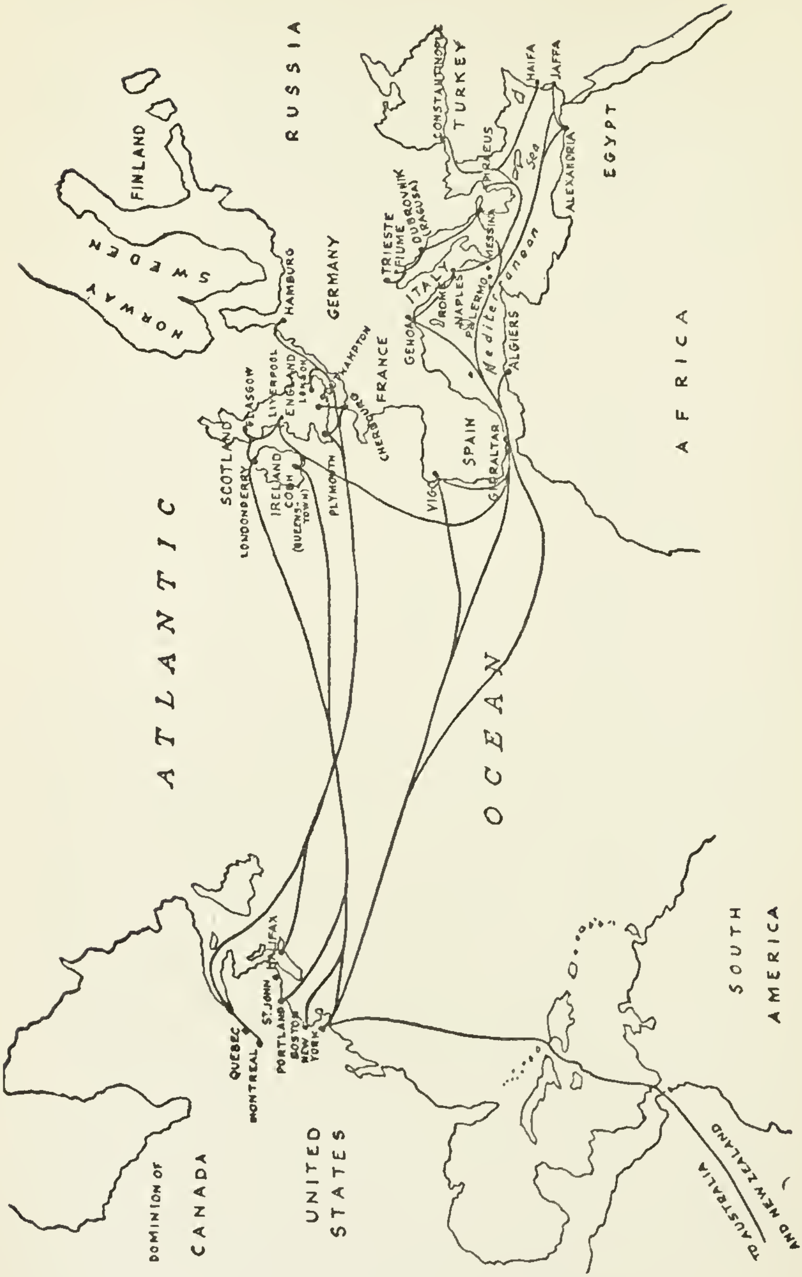

Fig. 27.—Map of Atlantic Ports

one, an ordinary steamer trunk will save you a lot of trouble.

Things to Wear.—Even if you have a trunk with you, a suitcase well stocked up is a mighty safe and sane thing to keep right with you, for somehow, somewhere, sometime, your trunk may be held up or lost. A white flannel suit with cap to match and white shoes bake a nice ensemble to put on during the day for promenading the deck, if you are making your voyage in the summer time, and this goes whether you are a boy or a girl. Most of the male population of a ship, however, wear business and sport suits, just as they do at home, but wear caps instead of hats. The female contingent can wear a three-piece sport dress such as I described in Chapter I, Part I.

In the autumn and spring a top coat will be found as serviceable at sea as it is in these seasons in the northern latitudes on land, although there may be a day or two on your eastward voyage to Europe when you cut across the Gulf Stream[6] and the weather will be as warm and as balmy, even in winter, as it is in the month of June in the northern states. In the Pacific much the same conditions prevail as to temperature when you are sailing over the southern routes in winter, but the northern routes are generally cold all the way across.

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[6] This is a warm stream of the north Atlantic Ocean that begins at the east coast of South America and flows up into the Gulf of Mexico and then out of it when it flows along the coast of North America to Nantucket Island. It is then deflected northeastward across the ocean and along the western coast of England. Although England is in the same latitude as Labrador, the Gulf Stream makes it as warm as though it were in the latitude of Virginia.

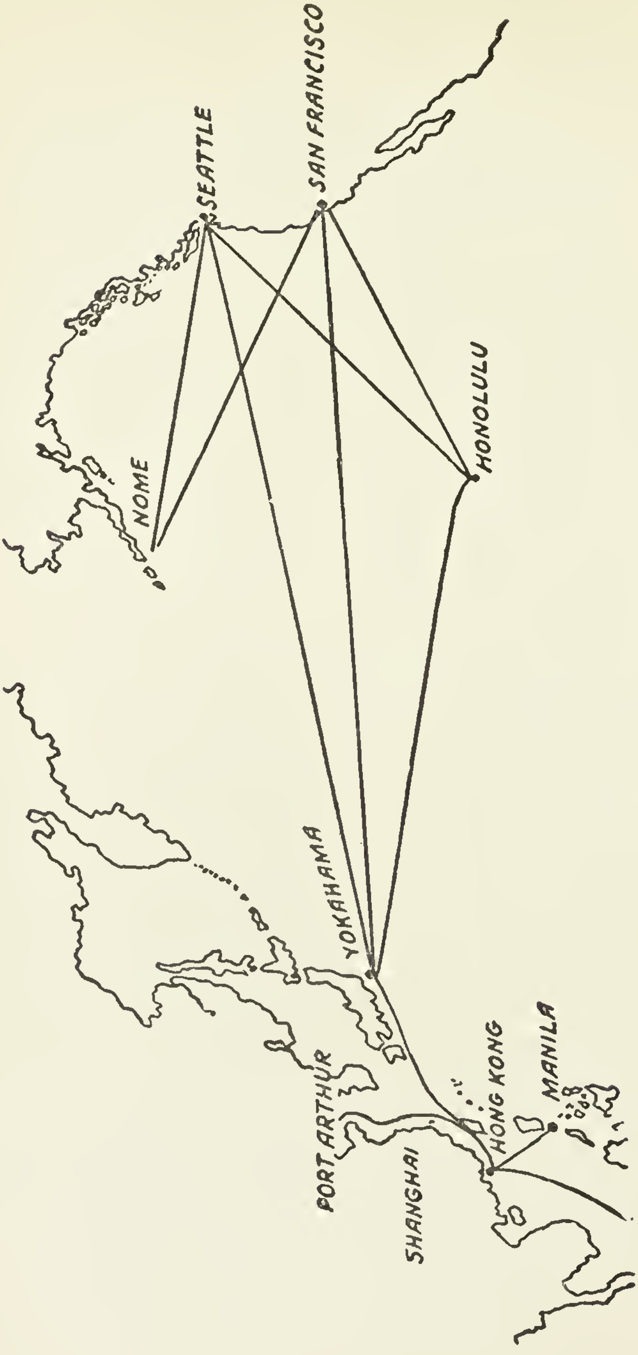


Fig. 28.—Map of Pacific Ports

Some Useful Accessories.—What I have said about taking a camera along, in Chapter I, Part I, holds as good in going overseas, only more so, as it does in making land cruises at home, and if you don't take one with you, you will be sorry for it to the end of your days. Another instrument that will be of great service and pleasure is a pair of field glasses, or *binoculars,* as they are usually called. An ordinary pair of binoculars which magnifies about four diameters can be bought for as little as ten dollars, but they are bulky and out-of-date. A pair of compact, high-powered prism binoculars costs anywhere from fifteen to fifty dollars, or more, and these are the real goods.

A Sailor's Ditty Box.—It is a mighty good scheme to have a small *ditty box,* as the sailors call it, and keep a pair of scissors, needles and thread in it, besides a few other first-aids, such as some medicinal absorbent cotton, a roll of gauze bandage, some vegetable pills, migraine tablets for headache and other kinds of acute pains. These few things will mend all of your ordinary ailments, and for your extraordinary ones you can call in a tailor or a doctor, according to the nature of your needs.

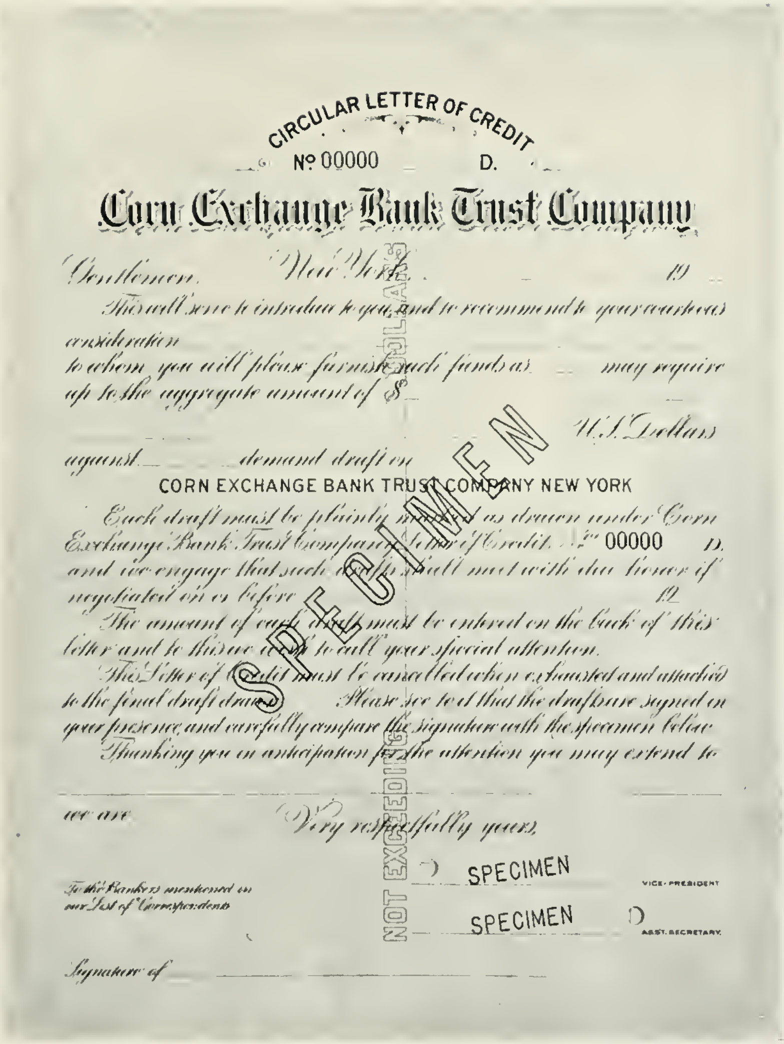
Something to Read.—Every ship has a little library of its own, consisting chiefly of books of fiction and travel, and while you can get enough reading matter from this source to supply your needs, on your way across, you should take a couple of good books with you, such as *Buried Alive,* by Arnold Bennett, or *The White Company,* by Conan Doyle, or you can take your choice of any couple of fifty or more recent novels.

I have taken it for granted that you have read up on the sights that you want to see in the countries you are going to visit as soon as you felt the travel bug in your system, but whether you have or not, you should get a good handbook, such as those issued by Baedeker or Murray, and both of which are very complete, and the smaller and less expensive handbooks published by Thomas Cook and Son. Whichever kind you get, it will prove most pleasurable and profitable reading when you are outward bound and absolutely indispensable when you reach the country of your dreams.

About Baggage Limitations.—Whatever baggage you take along, by all means make it as light and compact as possible, for on the railways of Europe the limit for free baggage is often put at seventy-five pounds, and sometimes less.

About Your Travel Funds.—To get the best there is in travel you must be able to go along your chosen way without let or hindrance, and to do this you must have, first, funds at hand, and second, to know the monetary system of the country you are travelling in. Now, there are several ways to provide yourself with funds besides carrying the actual cash around with you. It is bad practice to take any considerable sum of money with you, for, if you don't lose it, it may be stolen from you.

Still, you must always have funds at your command, and you should have more funds by twenty-five or fifty per cent with you than you expect to spend, just in case an emergency should arise, for cabling home for money is expensive, and waiting for it to come is heart-breaking. Now, there are two chief schemes that travellers use to carry funds that are perfectly safe, and these are (1) *letters of credit,* and (2) *travellers' cheques.*



CIRCULAR LETTER OF CREDIT

№ 00000 D.

Corn Exchange Bank Trust Company

Gentlemen, New York, 19

This will serve to introduce to you and to recommend to your courteous consideration

to whom you will please furnish such funds as may require up to the aggregate amount of $

U.S. Dollars

against demand draft on

CORN EXCHANGE BANK TRUST COMPANY NEW YORK

Each draft must be plainly marked as drawn under Corn Exchange Bank Trust Company Letter of Credit No. 00000 D. and we engage that such drafts shall meet with due honor if negotiated on or before 19

The amount of each draft must be entered on the back of this letter and to this we wish to call your special attention.

This Letter of Credit must be cancelled when exhausted and attached to the final draft drawn. Please see to it that the drafts are signed in your presence, and carefully compare the signature with the specimen below.

Thanking you in anticipation for the attention you may extend to

we are

Very respectfully yours,

SPECIMEN
VICE-PRESIDENT

SPECIMEN
ASST. SECRETARY.

To the Bankers mentioned on our List of Correspondents

Signature of

SPECIMEN

NOT EXCEEDING $ DOLLARS

FIG. 29. WHAT A LETTER OF CREDIT LOOKS LIKE.

A letter of credit, a facsimile of which is shown in Fig. 29, is a confidential document issued by your home bank, in which you carry an account, instructing certain banks in foreign cities, which you are going to visit, to pay you a specified amount of money. When, then, you reach London, Paris, Rome, or other cities you need only to present your letter of credit at the designated bank, ask for any part or all of the money it calls for, and the cashier will forthwith give it to you.

The banks, steamship companies and tourist agencies issue travellers' cheques, see Fig. 30, and these have the advantage over letters of credit in that you can cash them at the foreign offices of these organizations as well as at hotels and in almost every other place you offer them. In other words, they are nearly as handy as money, for you can pay your bills and get back the change coming to you, but they are better than money, for if you should lose your book of cheques you can stop payment on them and the bank, company, or agency which issued it will make good the amount to you. These cheques are usually issued in denominations of ten dollars up, or some other multiple of it, and on those of some companies there is printed the approximate value they represent in various foreign countries. The equivalent values of coins and money of various countries is roughly given in Chapter VIII, Part II, of this book. It is not possible to give the exact values, because the rate of exchange is constantly fluctuating, but you can get a fair idea of them.

Your Passport and Visas.—The word *passport* comes from the French *passer,* which means to *pass,* plus *port,* a *harbour,* and it means a document that permits you to enter or leave a port and to pass into and through a country. A United States passport consists of a paper issued by the Department of State and signed by the Secretary thereof. It includes (1) a statement to the effect that you are to be allowed to pass safely and freely and to be given all lawful protection in the country through which you are travelling, and (2) a personal description and a photograph of yourself. It is good for all countries for a period of twelve months from the date of issuance, but you can have it extended without cost for another year. For all of this our generous Government charges you the small sum of ten dollars,[7] and this is but the beginning of your passport fees.

If you are in the United States you can get your passport by going to the District Court in any large city, or you can write direct to the Secretary of State, Washington, D. C., and enclosing your check or a money order for ten dollars. Should you be in a foreign country and want to renew your passport, apply to the United States Consular Office.

After you have received your passport you must have it *visaed* (pronounced, *ve'zad*) by the Consul of whatever country you want to travel in. The word *visé* (pronounced *vé za*) is a French one, and it means that you must have an indorsement put on your passport by an accredited representative of the country you are going to enter, and that you have his authority to proceed. For this impertinent piece of red tape you will pay an additional ten dollars to each Consul of England, France, Italy, Germany, and some of the

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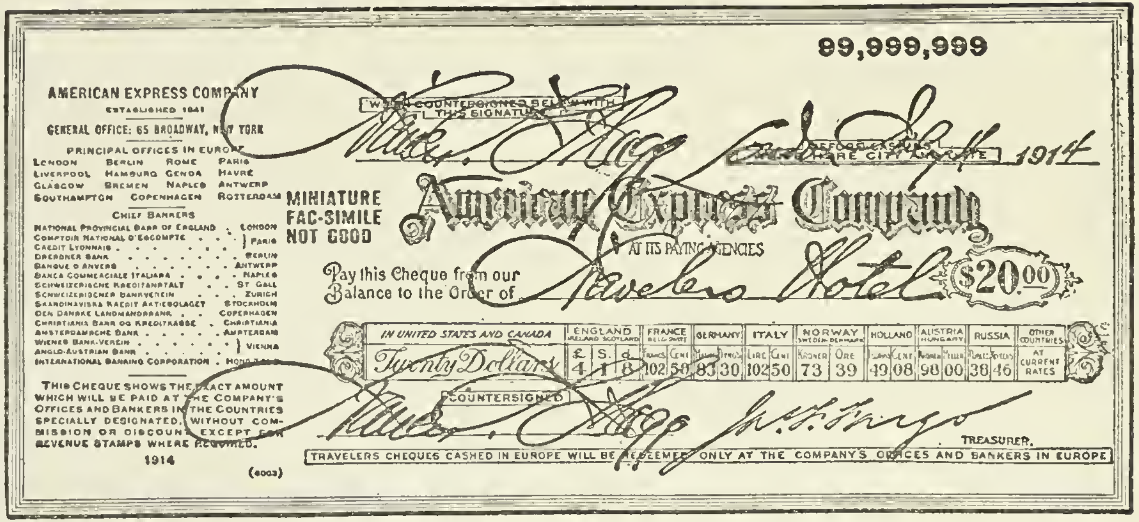
[7] A British subject only pays $2.50 for his passport, and this includes the visé charges for all Continental countries.



99,999,999

AMERICAN EXPRESS COMPANY
ESTABLISHED 1841
GENERAL OFFICE: 65 BROADWAY, NEW YORK

PRINCIPAL OFFICES IN EUROPE
LONDON BERLIN ROME PARIS
LIVERPOOL HAMBURG GENOA HAVRE
GLASGOW BREMEN NAPLES ANTWERP
SOUTHAMPTON COPENHAGEN ROTTERDAM

CHIEF BANKERS

NATIONAL PROVINCIAL BANK OF ENGLAND	LONDON
COMPTOIR NATIONAL D'ESCOMPTE CREDIT LYONNAIS	PARIS
DRESDNER BANK	BERLIN
BANQUE D'ANVERS	ANTWERP
BANCA COMMERCIALE ITALIANA	NAPLES
SCHWEIZERISCHE KREDITANSTALT	ST GALL
SCHWEIZERISCHER BANKVEREIN	ZURICH
SKANDINAVISKA KREDIT AKTIEBOLAGET	STOCKHOLM
DEN DANSKE LANDMANDSBANK	COPENHAGEN
CHRISTIANIA BANK OG KREDITKASSE	CHRISTIANIA
AMSTERDAMSCHE BANK	AMSTERDAM
WIENER BANK-VEREIN ANGLO-AUSTRIAN BANK	VIENNA
INTERNATIONAL BANKING CORPORATION	HONG KONG

THIS CHEQUE SHOWS THE EXACT AMOUNT WHICH WILL BE PAID AT THE COMPANY'S OFFICES AND BANKERS IN THE COUNTRIES SPECIALLY DESIGNATED, WITHOUT COMMISSION OR DISCOUNT, EXCEPT FOR REVENUE STAMPS WHERE REQUIRED.

1914

(4003)

MINIATURE
FAC-SIMILE
NOT GOOD

WHEN COUNTERSIGNED BELOW WITH THIS SIGNATURE

BEFORE CASHING WRITE HERE CITY AND DATE 1914

American Express Company
AT ITS PAYING AGENCIES

Pay this Cheque from our Balance to the Order of *Travelers Hotel* $20.00

IN UNITED STATES AND CANADA	ENGLAND IRELAND SCOTLAND			FRANCE		GERMANY		ITALY		NORWAY SWEDEN DENMARK		HOLLAND		AUSTRIA HUNGARY		RUSSIA		OTHER COUNTRIES
	£	S.	d.	FRANCS	CENT	[illegible]	[illegible]	LIRE	CENT	KRONER	ORE	[illegible]	CENT	[illegible]	[illegible]	[illegible]	[illegible]	
Twenty Dollars	4	1	8	102	50	83	30	102	50	73	39	49	08	98	00	38	46	AT CURRENT RATES

COUNTERSIGNED

TREASURER.

TRAVELERS CHEQUES CASHED IN EUROPE WILL BE REDEEMED ONLY AT THE COMPANY'S OFFICES AND BANKERS IN EUROPE

FIG. 30.—FACSIMILE OF A TRAVELLER'S CHECK

other countries, and a smaller sum to each of the Consuls of many of the less important countries. So, if you are going to do Europe, you can count on paying out from thirty to sixty dollars for your passport and visas alone.

II

BOOKING YOUR PASSAGE

AFTER you have made up your mind where you are going and when you want to go, the next thing to do is decide what steamship line you intend to patronize and to choose the ship you want to sail on. The country you are going to will help you to decide on the line you will take, and your pride and purse will be the two chief determining factors as to the ship you will sail on. When you have carefully turned all of these things over in your dome of thought you will then be ready to *book your passage.*

About Atlantic Lines and Liners.—There are some fifteen or twenty trans-Atlantic lines, six or more trans-Pacific lines, and any number of coastal lines, and each of these have a fleet of from a dozen to a hundred ships. Some of these are small, as ships are built today, and some of them are veritable leviathans, as ships were built yesterday. Some of them are eight- or ten-day boats, that is, it takes that many days for them to make the passage across the Atlantic, and others make the passage in a little less or more than five days. Some of them are scrupulously clean, and a few are quite the other way, and, finally, some of them are pretty expensive to go on, and others are very cheap. From the above you will see that there is a great variety of lines and liners to choose from, and this makes it rather hard for the tyro traveller to get the best value for the money he intends to spend. The purpose of this chapter, then, is to give you some idea of how to go about it to book your passage to the best all-around advantage.

The Easy Way of Booking Your Passage.—The average person who has never made a voyage books his passage the easiest way, but it is far from being the best way. His plan is to hit upon a certain day or date to sail on that may happen to strike his fancy. Next he finds out by consulting a newspaper or a general steamship agent, if there is one in his town or city, what ship sails on the day or date he has chosen, and whatever the ship may be that the paper names or agent says is the one he books his passage on.

Once in a while in this way he will catch one of the fine, big steamers, but more often he will find himself on a very ordinary boat. If he has never been overseas before, it may all seem good enough, but if he should ever sail on a real ship he will realize that the easy way of booking passage is a mighty poor way, and that this is a hard and fast world where one must use his brains if he is to get the best there is to be had for the money he has to spend. With a little trouble and insistence you can sail on the best ship that your money can purchase, and this will be only slightly in excess of the smaller and second-rate ships, of which every line has enough and to spare.

The Right Way to Book Your Passage.—When you are ready to choose the line you are going to patronize it is well to keep in mind that these can be divided into two general classes, as far as the Atlantic is concerned, and these are (1) lines whose ships sail the northern routes and (2) those whose ships sail the southern routes. Ships that sail over the northern routes, that is, those whose western ports of call are Montreal, Boston, New York and Philadelphia, and their eastern ports of call are Cobh,[1] Ireland; Liverpool, Plymouth, Southampton and London, England; Cherbourg, Bordeaux and Le Havre, France, and Bremen and Hamburg, Germany, and other North Sea and Baltic Sea ports, are generally cleaner and usually better than the ships of the Latin lines that sail the southern routes and whose ports of call are near or in the Mediterranean Sea.[2]

About Steamship Lines.—You can't go wrong if you go by any of the following lines to Europe: (1) The United States Line, The White Star Line, The French Line, The Holland-American Line, The Cunard Line, The Hamburg-American Line and the North German Lloyd Line. There are possibly some other lines that give just as excellent service as those named above, but I am not personally acquainted with them, and from the above list you will have no trouble to fit your proposed sailing date with a good ship.

How to Know a Good Ship.—Generally speaking, there is as great a difference between the ships of any given line as there is between the hotels in any given city, and yet the difference in passage money for about the same stateroom accommodations is hardly enough so that you can notice it. Book passage on any of the following ships and, if you travel first cabin, you will be assured of all the luxury to be found in the finest hotels, together with a few you never dreamed of. Second cabin will give you all the comforts of home, and some that the usual home does not boast of, and third cabin will provide for all of your physical wants, but without any frills and furbelows on the æsthetic side. Whatever class you travel, you will be entertained by as cosmopolitan a crowd as you will ever find anywhere this side of Davy Jones's locker.[2]

---

[1] Formerly called Queenstown.

[2] Some of the better lines are the equal of the Northern Lines now.

Some Good First Cabin Ships.—It may be truthfully said that all of the larger liners are good first class cabin ships, but the very largest are generally the most luxurious and comfortable and the fastest, and so why pay as much for passage on a fifteen or twenty thousand ton ship as you would on a twenty-five to a fifty thousand ton ship. The following is a list of the largest ships in the trans-Atlantic service, together with their gross tonnage, breadth and length:

Name of Ship	*Gross Tonnage.*	*Length in Feet.*	*Breadth in Feet.*
Leviathan	59,957	907.6	100.3
Majestic	56,551	915.5	100.1
Berengaria	52,226	885.6	98.3
Ile de France	43,500	752.8	91.8
Olympic	46,439	852.5	92.5
Aquitania	45,647	868.7	97.0
Paris	34,569	735.4	85.3
Homeric	34,351	751.0	83.3
Roma	32,583	705.6	82.8
California	32,450	601.0	80.0
Columbus	32,354	749.6	83.1
Mauretania	30.696	762.2	88.0
Statendam	28,150	670.4	81.4
Belgenland	27,132	670.4	78.4
Conte Grande	25,660	659.0	78.0
Empress of Scotland	25,160	677.5	77.3
Saturnia	25,000	599.0	79.5
Vulcania	25,000	599.0	79.5

Some Good Second Cabin Ships.[3]—

De Grasse [4]—French Line.

Milwaukee [4]—Hamburg-American Line.

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[2] The bottom of the sea; hence, to be buried at sea.

[3] Where only second-class passengers are carried they are called *Cabin Ships.*

[4] These are two new boats that were put in service this summer (1929).

St. Louis—Hamburg-American Line.
Duchess of Athol—Canadian Pacific Line.
Duchess of Bedford—Canadian Pacific Line.
Caronia—Cunard Line.
Carmania—Cunard Line.
Lapland—Red Star Line.

Some Third Cabin or Tourists' Ships.[5]—

Minnekada—Atlantic Transport Line.
Minnesota—Atlantic Transport Line.
Devonian—Leyland Line.
Winifredian—Leyland Line.

Now, Your Stateroom.—The room which you will occupy on your trip across is called a *stateroom.* The best first cabin staterooms of the big ships are fitted up just like the rooms in a first-class hotel, that is to say, each one has hot and cold running water, electric lights shaded so that you can read when lying down, an electric fan to keep you cool, a telephone to enable you to make known your wants, a real bed and a lavatory.

Ordinary staterooms have bunks secured to the sides of the walls for beds, and these are called *berths.* Usually there are two berths in each stateroom, and unless you pay extra for the privilege of privacy, you will have a roommate to keep you company, which is not always pleasant if he is a stranger to you, and even a *pal* is sometimes in the way, except when both of you are asleep. But, any way you feel about it, you have the satisfaction of knowing that it cannot last for longer than ten days, and very often by that time

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[5] Third Cabin ships, that is ships which carry third cabin passengers only, are at this writing limited to the above named ones.

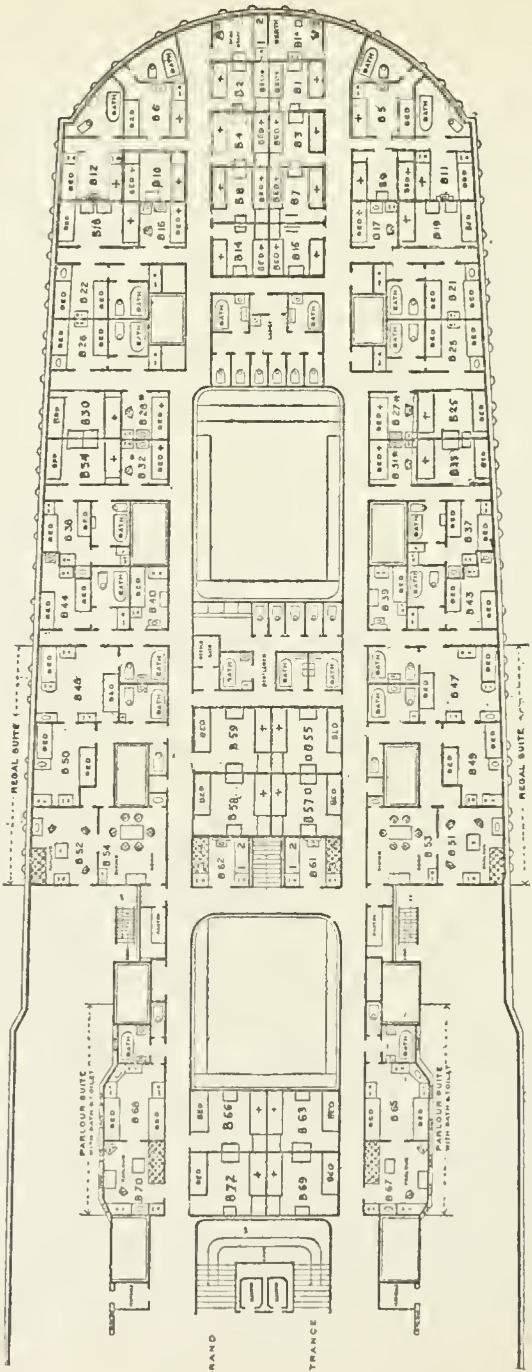

REGAL SUITE
REGAL SUITE
PARLOUR SUITE WITH BATH & TOILET
PARLOUR SUITE WITH BATH & TOILET
GRAND ENTRANCE

FIG. 31-A.—DECK PLAN OF S. S. MAURETANIA

Courtesy Cunard Steamship Co.

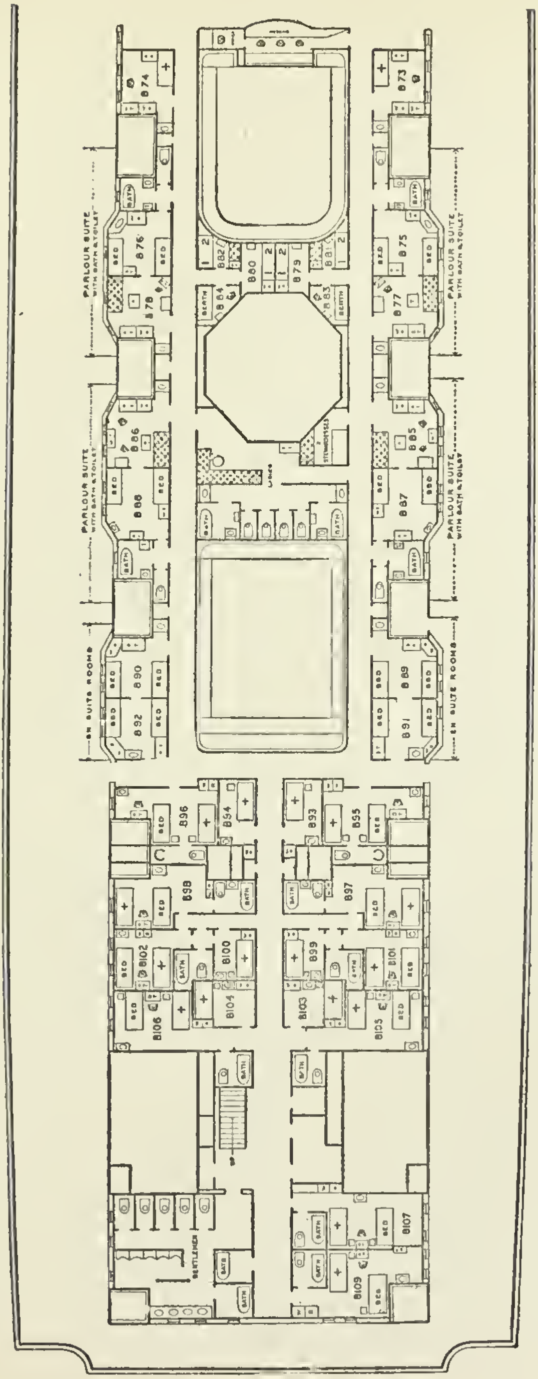
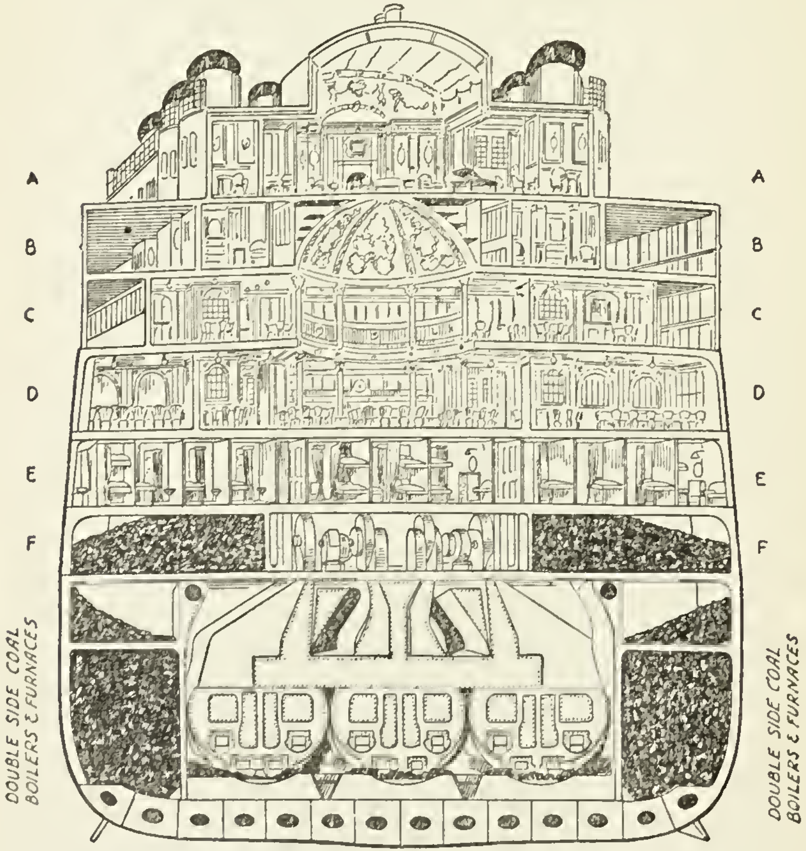


Fig. 31-B.—Deck Plan of S. S. Mauretania

you will have become such good friends you will hate to lose him.

The third cabin staterooms, as a rule, have four berths in them and, it follows, that you must *double up* with one, two or three other fellows, and when this happens you will never get the nightmare, for there will be no available room for that fiendish animal to get in. But, don't worry, you will only be in your


A
B
C
D
E
F
DOUBLE SIDE COAL BOILERS & FURNACES
A
B
C
D
E
F
DOUBLE SIDE COAL BOILERS & FURNACES

Courtesy Cunard Steamship Co.

Fig. 32-A.—Transverse Cross Section of the Mauretania

stateroom when you want to sleep, and so you'll live through it.

The Decks of a Ship.—Some of the largest ships have as many as seven or eight decks, as shown in Fig. 31, and, though each deck has a name, they usually go by letters. Beginning with the topmost deck they are:

Names of the Decks

A.—The Boat Deck.
B.—The Promenade Deck.
C.—The Shelter Deck.
D.—The Upper Deck.
E.—The Main Deck.
F.—The Lower Deck.
G.—The Orlop Deck.[6]

The first cabin staterooms, see Fig. 32, are on the *A* or boat deck, *B* or promenade deck, *D* or upper deck, and *E* or main deck. There are no first cabin staterooms on the *C* or shelter deck, as this deck is entirely given over to the second cabin passengers. The third cabin staterooms are on the *C* or upper deck, while the third class or steerage passengers[7] are tucked away on the *E* or main deck fo'ard.

Some of the staterooms are well for'ard and others are well aft, but as the pitching motion of the ship is felt least in or near the middle of it, try to book one there, unless you are a good sailor. If you like plenty of air, book your stateroom on the *A* or boat deck, or on the *B* or promenade deck, but, as the rolling motion of the ship is felt less nearer the hull, some people prefer the *D* or upper deck and *E,* the main deck. While, of course, it's largely a matter of preference, I prefer the *B* or promenade deck to any of the others.

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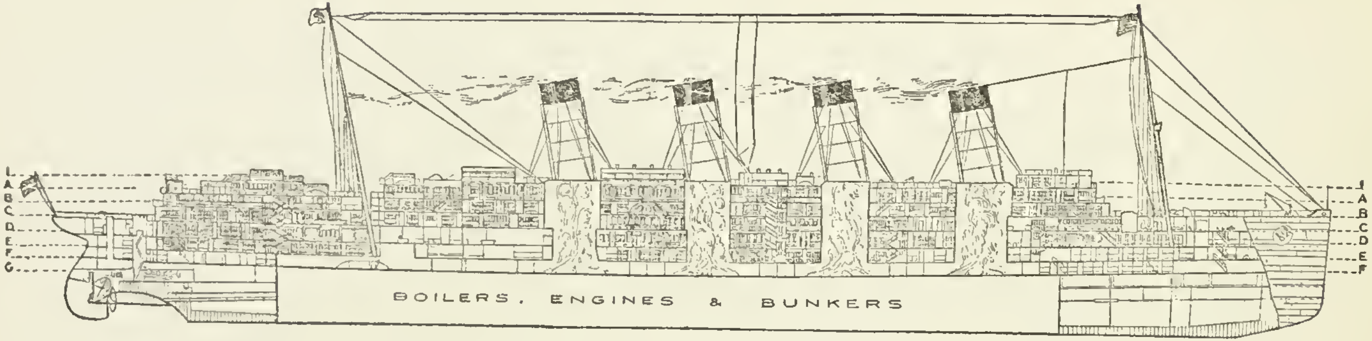
[6] The lowest deck of a ship, and formerly consisting of a platform laid over the beams of the hold.

[7] Do not confound third cabin passengers with third class or steerage passengers.



I.—Navigating Bridge, Officers' Rooms, Roofs of Public Rooms, Marconi House, Docking Bridge.

A or BOAT DECK.—Captain's Rooms, 1st Class Library, Grand Entrance, Passenger Elevators, 1st Class Lounge, Music Room, Smoke Room, and Verandah Café, 2nd Cabin Promenade and Lounge.

B or PROMENADE DECK.—Forecastle Head, Head Front of Promenade Deck, Observation Corridor, 1st Class Staterooms, Regal Suites, En suite Rooms, Grand Entrance and Passenger Elevators, 1st Class Staterooms, Dome of Dining Saloons, 2nd Cabin Promenade, 2nd Cabin Drawing Room, and 2nd Cabin Smoke Room.

C or UPPER DECK.—Forward Capstan and Windlass Machinery, 3rd Class Smoke Room and 3rd Class Ladies' Room, 3rd Class Covered Promenade, 3rd Class Main Entrance, 1st Class Children's Dining Saloon and Nursery, Grand Entrance and Passenger Elevators, 1st Class Grand Dining Saloon, Engineers' Quarters, 2nd Cabin Main Entrance, 2nd Cabin Staterooms, and 2nd Cabin Promenade

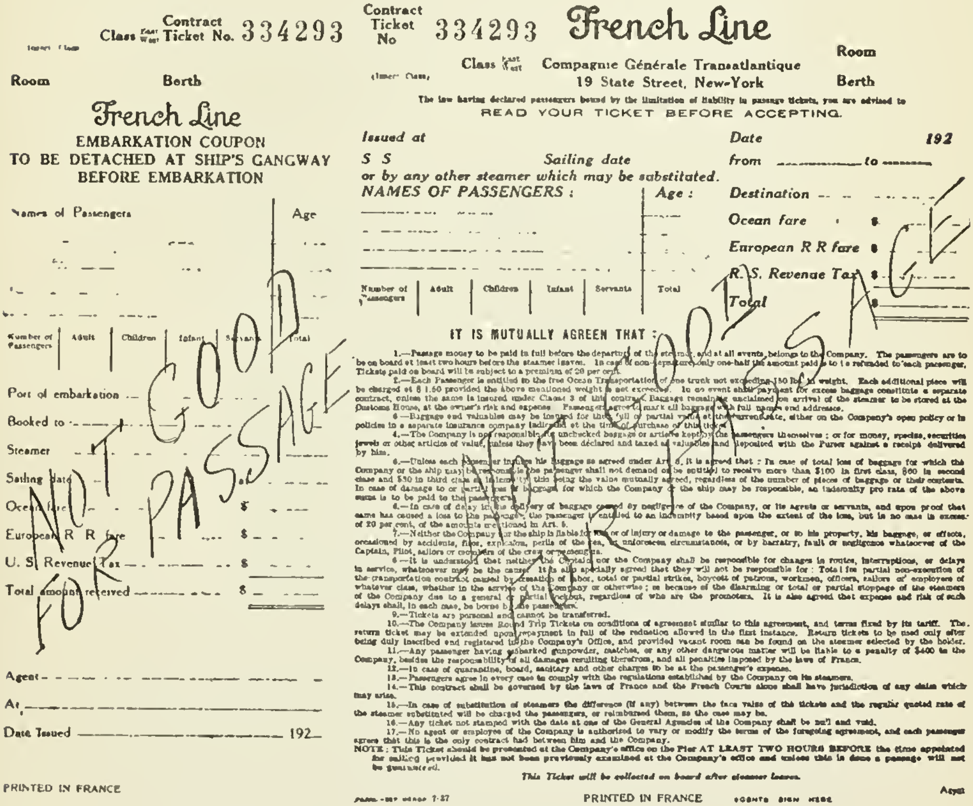
D or SALOON DECK.—Stewards' Quarters, 3rd Class Main Dining Saloon, 1st Class Staterooms, Grand Entrance and Passenger Elevators, 1st Class Grand Dining Saloon, Galleys and Pantries, 2nd Cabin Dining Saloon, 2nd Cabin Staterooms, Stewards' and Cooks' Quarters.

E or MAIN DECK.—Seamen's Quarters, 3rd Class Cabins, Grand Entrance and Passenger Elevators, 1st Class Staterooms, Firemen's Quarters, 2nd Cabin Staterooms, Stewards' Quarters.

F or LOWER DECK.—1st Class Baggage Rooms, 3rd Class Cabins, Coal, Stores, Wines, Spirits, Firemen's Quarters, Mail Room, Mail Sorting Room, Stewards' Quarters.

FIG. 32-B.—LONGITUDINAL CROSS SECTION OF THE MAURETANIA

The matter of climbing stairs has been done away with on the largest ships, for elevators, or *lifts,* as our British cousins call them, have been installed, and so, no matter what deck your stateroom is on, you can easily and quickly reach it. An outside stateroom amidship on the *A* or boat deck or on the *B* or promenade deck, if you can afford it, is the best for any one of a number of reasons, but it is better to have an outside room on some other deck than an inside room



Class East West Contract Ticket No. 334293

Room Berth

French Line

EMBARKATION COUPON
TO BE DETACHED AT SHIP'S GANGWAY
BEFORE EMBARKATION

Names of Passengers	Age

Number of Passengers	Adult	Children	Infant	Servants	Total

Port of embarkation
Booked to
Steamer
Sailing date
Ocean fare $
European R R fare $
U. S. Revenue Tax $
Total amount received $

Agent
At
Date Issued 192

PRINTED IN FRANCE

NOT GOOD FOR PASSAGE

Contract Ticket No 334293 **French Line**

Class East West

Compagnie Générale Transatlantique
19 State Street, New-York

Room
Berth

The law having declared passengers bound by the limitation of liability in passage tickets, you are advised to
READ YOUR TICKET BEFORE ACCEPTING.

Issued at
S S *Sailing date*
or by any other steamer which may be substituted.

NAMES OF PASSENGERS :	*Age :*

Number of Passengers	Adult	Children	Infant	Servants	Total

Date *192*
from to
Destination
Ocean fare $
European R R fare $
R. S. Revenue Tax $
Total $

IT IS MUTUALLY AGREEN THAT :

1.—Passage money to be paid in full before the departure of the steamer, and at all events, belongs to the Company. The passengers are to be on board at least two hours before the steamer leaves. In case of non-departure, only one-half the amount paid is to be refunded to each passenger. Tickets paid on board will be subject to a premium of 20 per cent.

2.—Each Passenger is entitled to the free Ocean Transportation of one trunk not exceeding 150 lbs. in weight. Each additional piece will be charged at $ 1.50 provided the above mentioned weight is not exceeded. In no event shall payment for excess baggage constitute a separate contract, unless the same is insured under Clause 3 of this contract. Baggage remaining unclaimed on arrival of the steamer to be stored at the Customs House, at the owner's risk and expense. Passengers agree to mark all baggage with full names and addresses.

3.—Baggage and valuables may be insured for their full or partial value at the current rate, either on the Company's open policy or in policies in a separate insurance company indicated at the time of purchase of this ticket.

4.—The Company is not responsible for unchecked baggage or articles kept by the passengers themselves; or for money, specie, securities jewels or other articles of value, unless they have been declared and taxed as valuables and deposited with the Purser against a receipt delivered by him.

5.—Unless each passenger insures his baggage as agreed under Art. 3, it is agreed that: In case of total loss of baggage for which the Company or the ship may be responsible the passenger shall not demand or be entitled to receive more than $100 in first class, $60 in second class and $30 in third class as indemnity, this being the value mutually agreed, regardless of the number of pieces of baggage or their contents. In case of damage to or partial loss of baggage for which the Company or the ship may be responsible, an indemnity pro rata of the above sums is to be paid to the passengers.

6.—In case of delay in the delivery of baggage caused by negligence of the Company, or its agents or servants, and upon proof that same has caused a loss to the passenger, the passenger is entitled to an indemnity based upon the extent of the loss, but in no case in excess of 20 per cent, of the amounts mentioned in Art. 5.

7.—Neither the Company nor the ship is liable for loss or of injury or damage to the passenger, or to his property, his baggage, or effects, occasioned by accidents, fires, explosion, perils of the sea, or unforeseen circumstances, or by barratry, fault or negligence whatsoever of the Captain, Pilot, sailors or members of the crew or passengers.

8.—It is understood that neither the Captain nor the Company shall be responsible for changes in routes, interruptions, or delays in service, whatsoever may be the cause. It is also specially agreed that they will not be responsible for: Total [illegible] partial non-execution of the transportation contract caused by cessation of labor, total or partial strikes, boycott of patrons, workmen, officers, sailors or employees of whatever class, whether in the service of the Company or otherwise; or because of the disarming or total or partial stoppage of the steamers of the Company due to a general or partial lockout, regardless of who are the promoters. It is also agreed that expense and risk of such delays shall, in each case, be borne by the passengers.

9.—Tickets are personal and cannot be transferred.

10.—The Company issues Round Trip Tickets on conditions of agreement similar to this agreement, and terms fixed by its tariff. The return ticket may be extended upon repayment in full of the reduction allowed in the first instance. Return tickets to be used only after being duly inscribed and registered in the Company's Office, and provided vacant room can be found on the steamer selected by the holder.

11.—Any passenger having embarked gunpowder, matches, or any other dangerous matter will be liable to a penalty of $400 to the Company, besides the responsibility of all damages resulting therefrom, and all penalties imposed by the laws of France.

12.—In case of quarantine, board, sanitary and other charges to be at the passenger's expense.

13.—Passengers agree in every case to comply with the regulations established by the Company on its steamers.

14.—This contract shall be governed by the laws of France and the French Courts alone shall have jurisdiction of any claim which may arise.

15.—In case of substitution of steamers the difference (if any) between the face value of the tickets and the regular quoted rate of the steamer substituted will be charged the passengers, or reimbursed them, as the case may be.

16.—Any ticket not stamped with the date at one of the General Agencies of the Company shall be null and void.

17.—No agent or employee of the Company is authorised to vary or modify the terms of the foregoing agreement, and each passenger agrees that this is the only contract had between him and the Company.

NOTE: This Ticket should be presented at the Company's office on the Pier AT LEAST TWO HOURS BEFORE the time appointed for sailing provided it has not been previously examined at the Company's office and unless this is done a passage will not be guaranteed.

This Ticket will be collected on board after steamer leaves.

Agent

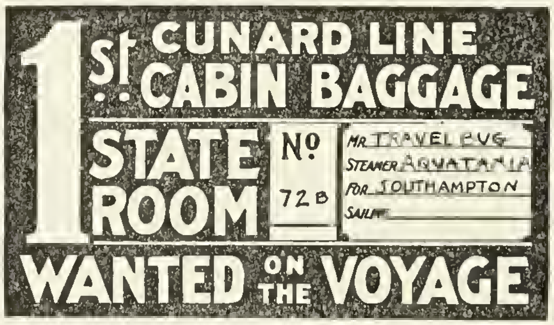
PRINTED IN FRANCE AGENTS SIGN HERE

NOT GOOD FOR PASSAGE

FIG. 33.—WHAT YOUR STEAMER TICKET LOOKS LIKE

on the promenade deck. The inside staterooms of nearly all of the larger ships have outside ventilation, and this helps some.

A Deposit on Your Passage.—If you want to have a stateroom reserved for a given sailing date, the steamship company will ask you to deposit about one-fourth of the amount of your passage money, and the balance must be paid at least a week before the ship sails. Unless you make this deposit or pay for your passage in full the company will not consider that you have made a reservation. It is always well to book your passage just as long beforehand as you possibly can, for then you will be able to have your choice of staterooms or berths, as the case may be. Very often, however, even during the rush season, you can get a stateroom on short notice before the boat sails that some one has turned in who has found it impossible to go, but this is taking a long chance. A reproduction of a steamship ticket is shown in Fig. 33.



1st CUNARD LINE
CABIN BAGGAGE
STATE ROOM
No. 72 B
MR TRAVEL BUG
STEAMER AQUATANIA
FOR SOUTHAMPTON
SAIL
WANTED ON THE VOYAGE

Fig. 34-A.—Labels for Your Trunk

Baggage and Baggage Allowance.—*Saloon cabin,* that is, first class cabin passengers, can carry with them twenty cubic feet of personal baggage free, but for every cubic foot of baggage in excess of the above amount an extra charge of twenty-five cents is made. If you want your trunk in your stateroom, you must put a tag or a label, or both, on it, marked *Stateroom,* but if you have a trunk that you will not need on the way over, then tag or label it *Hold,* which means that it will be put in the baggage-room of the hold. You will be given a bunch of tags and labels for your baggage, see *A* in Fig. 34, when you get your ticket, and on these you write your name and address and the number of your stateroom and tie or stick one to each individual piece as shown at *B.*

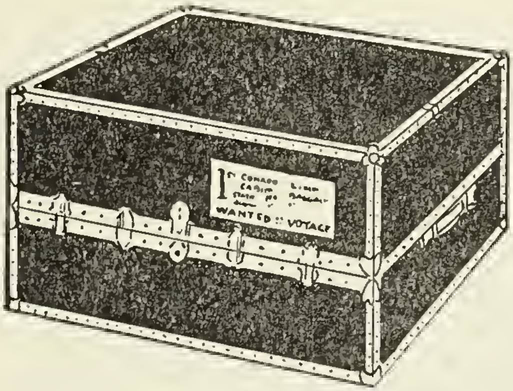


Fig. 34-B.—Your Steamer Trunk

Tickets and Information.—Every city of any size throughout the United States has a steamship agency, and the man in charge will be able to tell you about any line, or all of them, and the sailing dates, plans and rates of the ships belonging to them. If you are living in the port where the ship you want to go on sails from, you can deal direct with the steamship company, but there is no real advantage in doing this, for the rates are standardized and, hence, the same wherever you book your passage.

III

BON VOYAGE

WHEN you get out of the taxi, or your motor-car, you will find yourself on a pier or dock, which is usually covered over, and close to the *gang-plank,* as the long, narrow roped plank or platform is called that bridges the pier and the ship which lays alongside of it. The gang-plank is used for the passengers to board and leave the ship.

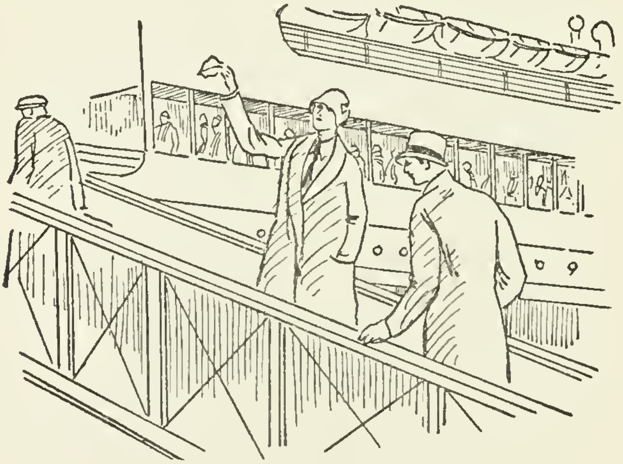


Fig. 35.—Going Aboard

Going Aboard.—One of the many *stewards*[1] you will see on the pier will take your baggage, put it on a truck, if a trunk is included in the pieces you have, and when you tell him the number of your stateroom and get his number, which please *don't forget to do,* he will take it aboard by a different gang-plank from the one that is used by the passengers. You may or may not have to show your ticket to the officers who are standing on either side of the end of the bridge that rests on the pier, but in any event you are soon on your way up the gang-plank, see Fig. 35, and onto the deck of the ship. Tell the first steward you come to, who is on the ship, the number of your stateroom, and he will get the key to it at the *purser's desk* and show you where it is.

---

[1] A *steward* is a male attendant on a ship. The word came originally from *sty,* a pen for swine, and *weard,* one who guards.

Saying Good-bye.—If friends have come down to see you off and to wish you *bon voyage* (pronounced *bon*[2] *voy-ajz'*) they can come aboard with you, inspect your stateroom, and even have the run of the ship, until they hear a long blast of the steamer's whistle, which is their cue that the time for sailing has come and for them to beget themselves ashore.

When they are again on the pier you can go to the deck which is most nearly on a level with it, and you will see your friends held back by a rope or a fence to keep them from being crowded off into the water. Then the dumb show begins, for they will say things to you which you are too far away to hear and you sing out, "All right!" and "I'll remember," which they cannot hear. After this sort of thing has kept up for half-an-hour everybody on and off the ship is heartily sick of the prolonged parting and both sides wish the steamer would up and put to sea.

On some ships a band will come close to the rail and play lively airs, which serves the dual purpose of helping to smooth out the sorrows of parting and to make the stay-at-homes on the pier wish they were going, too. Finally, the lines are cast off and, with the help of half-a-dozen tugs, the mighty floating palace is towed out and away from her pier and swung around with her trim bow pointed seaward. And at last your long-dreamed-of voyage has crystallized into a hard and fast reality.

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[2] In French, *bon* means *good.*

When the Good Ship Sails.—As your ship moves slowly down the North River, as the lower part of the Hudson River is called, if you are sailing from New York, or out of the bay toward Golden Gate, if you are sailing from San Francisco, you can still stick to the rail and wave *adieus* to your friends, and when they finally fade out of the picture you can take a long, last farewell look at the skyline of the city, for it will be many a day until you see it again.

Don't tarry too long, but instead, go to the writing-room and write a word of good cheer to your mother, your sister, or your boy or girl friend, or, still better, to all of them, though you have left them standing on the pier only half-an-hour before. Stamp your letters and hand them to the *purser,*[3] who will in turn give them to the postal clerk. This official will put them in a mail-pouch and when the *pilot*[4] gets off of the ship at *quarantine*[5] he will take the mail-pouch back to the city with him, when your letters will go to those whom you wrote to instanter, and they will be a little more than pleased to get them.

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[3] The name *purser* comes from *purse,* and in the navy he is the paymaster. On a passenger ship he is the equivalent of a clerk in a hotel.

[4] One who directs the course of a ship into and out of a port. This requires special knowledge, and when the ship is turned over to him by the captain he has full charge of navigating her.

[5] In the early days, when a ship arrived in port and it was suspected of having a contagious disease aboard, she was obliged to forego all intercourse with the shore for forty days. Quarantine now means that point at sea where the ship is stopped and boarded by health officers, who ascertain if all of the passengers and crew are in good health.

After the pilot has been dropped, that is, taken off by the pilot-boat, the ship will begin to speed up and she will keep up the rhythmic throbbing if her engines are of the reciprocating type, or constant humming if they are of the turbine kind, for the rest of the voyage.

Your Seat at the Table.—If you did not reserve your seat in the dining-room when you bought your ticket, and which is much the better way, go right now to the *chief steward* and have him assign a seat to you. Do not let him give you a seat that is in a corner facing the wall, but try to get one in or near a corner that faces the dining-room, for then you will be able to see the ship's company to the best advantage.

After the purser, the chief steward is quite the most important personage you will have to deal with direct, and what you want him to do and what he will do for you are two quite different things. But, after all, he is very human and practical and, it follows, amenable to persuasion, if you will *see him,* by which I mean give him a liberal tip right then and there, but in the genteel manner of a John B. Stanchfield lawyer of probity, so that only you and he and the groceryman know what is in your hearts, and he will manipulate things so that you will have a good seat.

A Deck Chair and Steamer Rug.—After securing your seat in the dining-room, go on the promenade deck and locate the *chair steward.* This is the boy or man who looks after the deck chairs, and you are entitled to one for the passage on the payment of one dollar. As in the case of your table seat, you can book your deck chair when you pay your passage money. Pay him for the chair at the end of the voyage, and give him a quarter tip.

Have your chair placed as nearly amidships as you can, and you will sometimes find it on the port side of the ship and sometimes on the lee side, according to which side the sun is shining on and the wind is blowing on. You will always be able to know your own chair, for the deck steward will tie a tag to it on which your name is written.

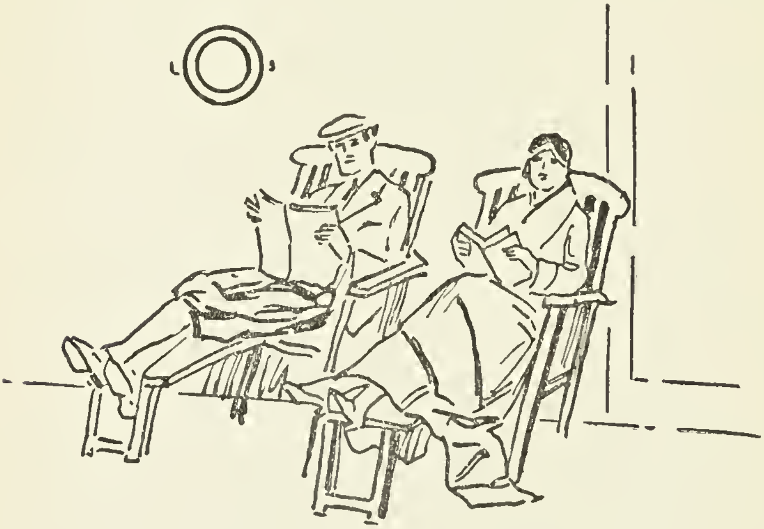

Fig. 36.—Your Deck Chair and Steamer Rug

A steamer rug to cover you when you are reclining in your deck chair may also be had of the deck steward at a rental of one dollar per trip, and this is a much better scheme than to take along one of your own, for it is bulky when rolled up and in the way after you disembark. As each rug is numbered, you will always be sure of getting the same one. On some ships the rugs are not only cleaned after each trip, but each one is put in a cardboard box, which is then sealed and the deck steward is supposed to open it only in your presence. A picture of you in a deck chair is shown in Fig. 36.

Are You a Sailor?—About eleven o'clock in the morning and four o'clock in the afternoon numerous stewards swarm over the deck carrying trays that are laden with things good to eat and drink. The salt air gives you an appetite like that of a rapacious shark, and you will eat cheerfully but, alas, neither wisely nor well, and the usual result is that presently you will have a desire to feed the fishes. This being true, you can take it from one who has seen Neptune and his merry mermaids over the rail of a ship, that it is best to resist the great temptation to eat, drink and be merry, unless you have been to sea before and know that you are a good sailor.

There are a hundred and one schemes and remedies to prevent and cure seasickness, from rolling on the floor to eating dried-beef and hard-tack, but as long as the pneumogastric nerve connects the brain with the stomach there will be people who insist on everything going out every time a little something comes in whenever they make a voyage.

There never has been anything discovered that will prevent or cure seasickness, and it is simply a waste of money to buy anything, either in boxes or bottles, that is sold with the claim of doing so. The nearest approach to a preventative is one that I found out quite by accident some years ago, and you can try it if you care to. Two months before you are to sail, take a teaspoonful or a tablespoonful of *mineral oil*[6] every night before you go to bed. This will clean out your stomach and put you in fine condition and coat the membranous lining of the former and the intestinal tract with a film of oil, and just as pouring oil on troubled water stills it, your troubled stomach will be stilled by its action—or, at least, I hope it will.

The Dining Saloon.—On ordinary steamships the meals are served *table d'hôte,* although there will be a bill-of-fare for you to choose from, but on the finest steamers the meals are served *a la carte,* though in this case there is no charge made for any of the dishes, that is, your meals are included just the same in the cost of your passage. On ships flying a foreign flag, the menus are printed in the native language on one side of the card and in English on the other side, and this prevents confusion and embarrassing conditions for English-speaking passengers.

When you go into the dining saloon for your first meal the head steward, or one of the second stewards, will show you to your chair at the table, but after that you don't need to wait to be shown again unless you are travelling first-class on one of the very fine ships. Ordinarily, though, you can go right in and seat yourself. On most of the steamers you will find the chairs screwed down to the floor, and while some of them are adjustable as to height, they are not nearly as comfortable as real chairs.

Tipping on the High Seas.—The waiter who serves you is called the *table steward,* and he will serve you cheerfully and to the best of his ability, for he knows that the unwritten convention will not permit you to give him a tip of less than two dollars and a half at the end of your voyage, and that you will make it a five-dollar note if you can afford to be that generous. You can hand him this gratuity after you have finished your last meal on board and he will do his part by humbly saying, "Thank you, sir!"

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[6] This is a colorless, odorless and tasteless oil that is ordinarily used in the treatment of constipation. Its action is different from cathartics in that it is purely mechanical and therefore absolutely harmless.

This tipping proposition also holds good with your *room steward,* and you must give him not less than two dollars and fifty cents for a voyage, and more if you can afford it. When I say you *must* give him a tip I mean that if you fail to do so you will fly in the face of all precedent, for it is a time-honoured custom of the sea, and my advice to you is not to break it, for stewards are like elephants in that they never forget. And, what's more, they are even worse than these thick-skinned proboscidea, for they pass your record on from one to the other to even the third and fourth generation, and some time, perhaps years later, when you again cross the ocean, you will be made to feel the result of your failure to conform to the traditions, which every well-bred person cheerfully does.

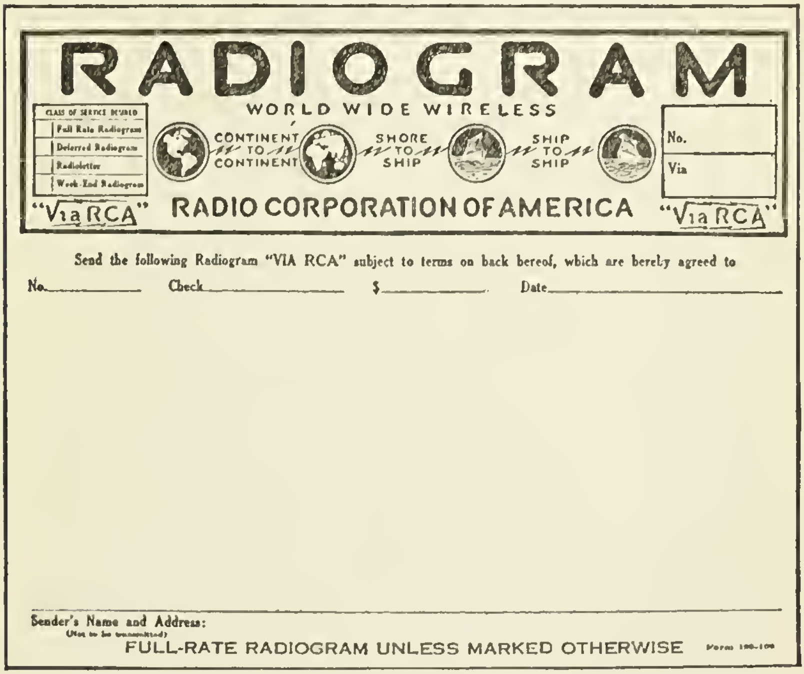
Your Bath is Ready.—Unless you have a stateroom with bath you will have to take your baths in the general bath-room, and this is presided over by a *bath-room steward.* When you are comfortably settled in your room your steward will ask you what time in the morning you would like your bath and what temperature you would like the water, and your reply is that you would like to have your bath at 8:15 o'clock and the water at seventy-five degrees, or any other figures that may be to your liking, and he will communicate your desires to the bath-room steward.

The reason he wants to know these little things is so that two or more people will not be up and clamoring to take a bath at the same time in the same tub, and so that the water will be exactly the temperature you like it every morning and, hence, you will not waste time in regulating it, and to get it just right he tests it with a thermometer. When your bath is ready your room steward will knock gently on your door and you will hear his soft voice saying, " Your bath is ready, sir! "

You hop out of bed feeling like a millionaire, put on your slippers and bath-robe, and your room steward will show you where the bath-room is. After that the bath-room steward will take care of you, and right here let me say that it is a breach of public bath-room etiquette to keep it longer than fifteen minutes. For his share of making life pleasant for you, give the bath-room steward a dollar when your voyage is ended.

Exercising on Shipboard.—Every morning before breakfast walk briskly up and down the promenade deck or, better, around it,—some decks are nearly a quarter of a mile around—and you will work up a regular old sea-dog appetite. After breakfast you can gym in the gymnasium, or swim in the swimming pool, or play shuffleboard, ring tennis or other games, on the boat deck, and by the end of your voyage you will feel like a new boy or girl, for exercising at sea is the most helpful tonic that a great and gracious Nature ever gave to the race of palefaces.

Services at Sea.—On Sunday afternoon a religious service is conducted in the lounge of the first-class cabin, or dining-room of a second cabin boat, by the captain or one of his staff officers; the stewards and stewardesses make up the chorus and the passengers are invited to join in the singing. The earnestness and simplicity of it all is mighty impressive. After the services a collection is taken up and the proceeds go to the sailors' widows and orphans. Entertainments of every conceivable kind are arranged by the passengers, so that something is going on practically every night of the trip, and the last night before reaching port a thanksgiving performance is given and a collection taken up for the same noble purpose.



RADIOGRAM

WORLD WIDE WIRELESS

CLASS OF SERVICE DESIRED
- ☐ Full Rate Radiogram
- ☐ Deferred Radiogram
- ☐ Radioletter
- ☐ Week-End Radiogram

CONTINENT TO CONTINENT — SHORE TO SHIP — SHIP TO SHIP

No.
Via

"Via RCA" RADIO CORPORATION OF AMERICA "Via RCA"

Send the following Radiogram "VIA RCA" subject to terms on back hereof, which are hereby agreed to

No.________ Check____________ $__________ Date________________

Sender's Name and Address:

FULL-RATE RADIOGRAM UNLESS MARKED OTHERWISE

Fig. 37.—A Radiogram Blank

Via Wireless.—Not so long ago it was the custom for passengers to send a cablegram to those whom they left behind at the earliest possible moment after the ship docked, but young wireless has stepped into old cable's shoes, so that now you can send a *radiogram*[7] any time after leaving port, to either shore, and the charge varies according to the number of words you send and the distance the ship is from the shore.

Messages to interior towns and cities in the United States are forwarded when they reach the receiving station on the seaboard by both the Western Union and Postal Telegraph companies; in Great Britain, by the Postal Telegraph Offices; and on the continent, by the Inland Telegraph and International Cables. Wireless telegraph blanks can be had of the purser, who will also tell you what the transmission charges are. A radiogram blank is shown in Fig. 37.

Fig. 38.—Writing a Book

How to Write a Book of Travel.—The foregoing are about all of the personal things you will encounter on your voyage of adventure and discovery, and, after a day or two out, when you have found yourself, you should go all over the ship and learn all about her. It's a good idea to put down everything about her, her crew and your fellow-passengers in your note-book, as well as the many bits of information you will hear from those you talk with.

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[7] A wireless telegraph message.

All of this may seem a sheer waste of time when life is so rose-tinted and full of the joy of living, but you never can tell when you will want to write a *Book of Travel* (see Fig. 38), and then all you will have to do is to take your note-book, live over again your experiences, dictate it to your private secretary, and have her typewrite it on some good bond paper. Or you can do it yourself in longhand, which is the way that I write my books.

The script finished, you can send it in to your publisher and scrawl a note which says in substance, " Here is my last book, and I would thank you for your check for advance royalties, which please send immediately, if not sooner, for the travel bug is at work again and I must needs make another trip," etc., etc.

IV

THE FASTEST SHIP AFLOAT

LET us suppose, now, that you have booked passage on one of the largest ships afloat and, for the sake of making a *new departure*, as those who are versed in nautical lore would say, let us think you are aboard the *Mauretania,*[1] which is pictured in Fig. 39. She is the sister ship of the *Lusitania,*[2] which was torpedoed by the German submarine U-24, in May, 1915, and they were as like as two peas in a pod.

The Speed of the Ocean Greyhound.—Get in conversation with any one of the ship's crew, and he will tell you that while the *Mauretania* is not the largest ship, she is the fastest one in the world, having made the eastward passage in four days, thirteen hours and forty-one minutes and the westward passage in four days, ten hours and forty-one minutes. The time of these record-breaking runs is measured from Ambrose Lightship off New York, to Daunt's Rock off Cobh,[3] Ireland, and the distance is about twenty-eight hundred sea miles.

The best day's steaming of this great ship was six hundred and seventy-six miles, and her best average speed was twenty-six and six-tenths *knots.* Now, a knot is equal to one and three-twentieth *land miles,* so her speed was just about thirty miles per hour. But, while you speak of a train going so many *miles per hour,* it isn't proper to say a ship sails so many *knots per hour,* for a knot is both the *distance* and the *time* taken together.

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[1] Named from *Mauretania,* which originally was a kingdom that included what is now Morocco and a part of Algiers.

[2] Named from *Lusitania,* the ancient Latin name of the region that is now called Portugal.

[3] Formerly Queenstown.

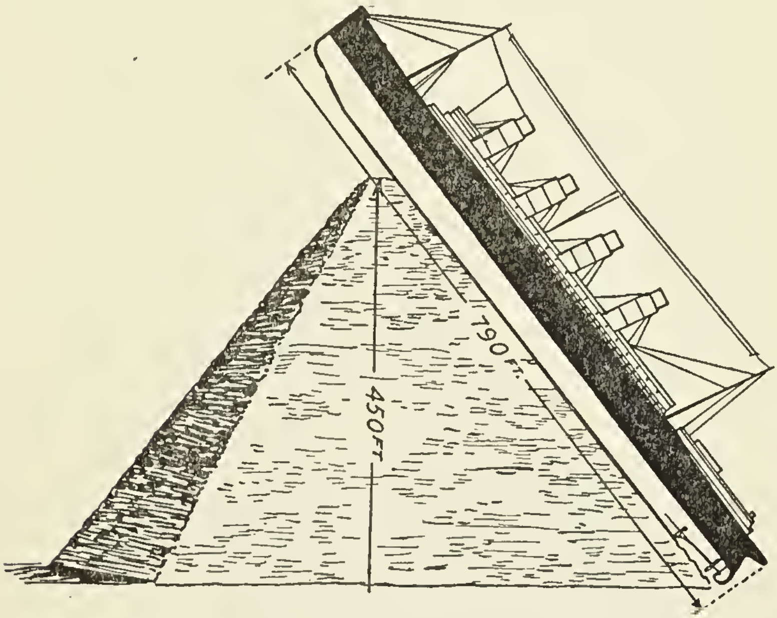

FIG. 39.—THE MAURETANIA CONTRASTED WITH CHEOPS

The Size of Her.—The length of the *Mauretania* is seven hundred and ninety feet, her beam, or breadth, is eighty-eight feet, and her depth from the boat deck, that is, the uppermost deck where the life-boats are kept, to the keel is eighty feet. Her *draught* (pronounced *draft*), which means the depth she sinks in the water, is thirty-seven feet and six inches when she is fully loaded. Her *displacement,* which is the weight of the water she displaces or pushes away, is on *load* *draught,* that is, when she is fully loaded, forty-five thousand tons.

The height of the ship from the top of her four *funnels,* as the smoke-stacks are called, is one hundred and fifty-five feet, and each one is twenty feet in diameter, or nearly twice that of the tunnels under the North and East Rivers, New York City, or the underground railway tubes of London. An interesting comparison which gives a good idea of the tremendous size of the *Mauretania* is shown in Fig. 39. The Great Pyramid of Egypt, which was built by King Cheops[4] of the fourteenth dynasty as a tomb for himself, has a height of four hundred and fifty feet and is therefore only a little more than half as high as the former is long.

Safety First at Sea.—While the speed of a ship and the comfort of her passengers are carefully looked after by the designers, builders, and those who operate her, still the first consideration of those responsible for her is that she shall be as safe as possible. With this focal point in mind she is guarded with all the modern appliances which science and invention have devised, and they have devised a good many.

Like all first-class ships, the *Mauretania* has a double bottom, that is, she is a ship within a ship. This double bottom is partitioned off into sections or spaces, called *compartments,* by water-tight *bulkheads,*[5] while the *hold* of the ship, which is the space in the hull, is also divided off into compartments. These latter are rooms in which the freight is stored, and they are fitted with great water-tight sliding doors that are worked by electric motors and can be closed either by some one at hand or from the distant *bridge,* in the event that a hole is stove into her by another ship or by an iceberg.

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[4] Pronounced *Ke'-ops.* He was an Egyptian king and built the greatest pyramid. He flourished about 3700 years B. C.

[5] These are upright partitions that separate the hold of a ship into compartments.

Now, let us see how and why these compartments can keep a disabled ship afloat, at least for a time, and all of which will be made clear if you will perform this simple experiment: Take a tin can, put a little water or a small weight into it, and then place it in a bucket of water, when it will, *of course,* float. This done, punch a hole in the bottom of the can, when it will quickly fill with water and sink. Finally, tie a good can to the one with a hole in it, and you will find that it will buoy up the leaking can and keep it afloat. In exactly the same way the closed compartments of a ship will keep her from going down (sometimes) when one or more of the other compartments are filled with water.

The Long Arm System.—A *bulkhead* is an upright partition that forms a compartment and, it follows, that a *bulkhead door* is the door in the bulkhead of a compartment. Not only are the bulkhead doors operated from the *bridge* by electricity, but there is an electric bell in each compartment, and this is rung from the bridge to warn any of the crew who might happen to be in it to know that the doors are about to be closed and so give them time to get out.

To make the *long-arm system* (see Fig. 40), as these distance-controlled doors are sometimes called, complete there is a *bulkhead indicator* set in the *chart house* on the bridge. This indicator is made up of as many electric lamps as there are bulkhead doors, and as long as the doors are open the lamps are not lighted, but the instant a door is closed it's lamp lights up, and

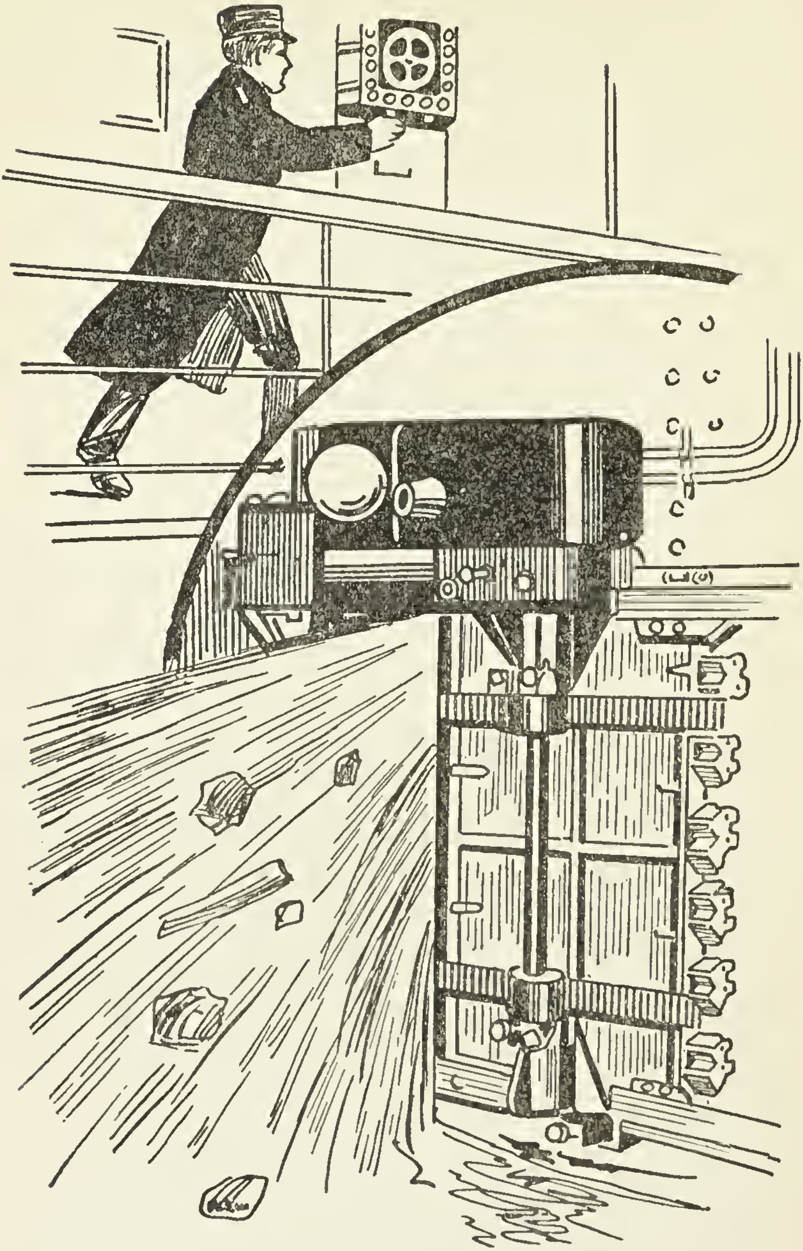


Fig. 40.—The Long Arm System

in this way the officers know at a glance the doors that are open and those that are closed.

In the Crow's-nest.—Away up on the foremast, in the *crow's-nest,* are perched the *lookouts,* that is, a couple of sailors who keep their eagle eyes pealed for other approaching ships, icebergs, derelicts, and other unconscionable dangers. A telephone line runs from the crow's-nest to the bridge, so that the lookouts can communicate anything which they may see to the navigating officer. The lookouts only stay on duty two hours at a stretch and, it follows, they are always fresh and alert.

The Steam Siren.—For general signalling at short range the steam siren, or steam whistle, is used. One long blast is the warning note that the ship is ready to sail. When the ship is under way one short blast means that she is turning to *starboard,* that is, to the right-hand side. Two short blasts means that she is turning to *port,* or to the left-hand side, and three short blasts are sounded when she is going *astern,* that is, backing up. When there is a thick fog or a squall blows up, the siren or whistle sends out a long blast every thirty seconds or so.

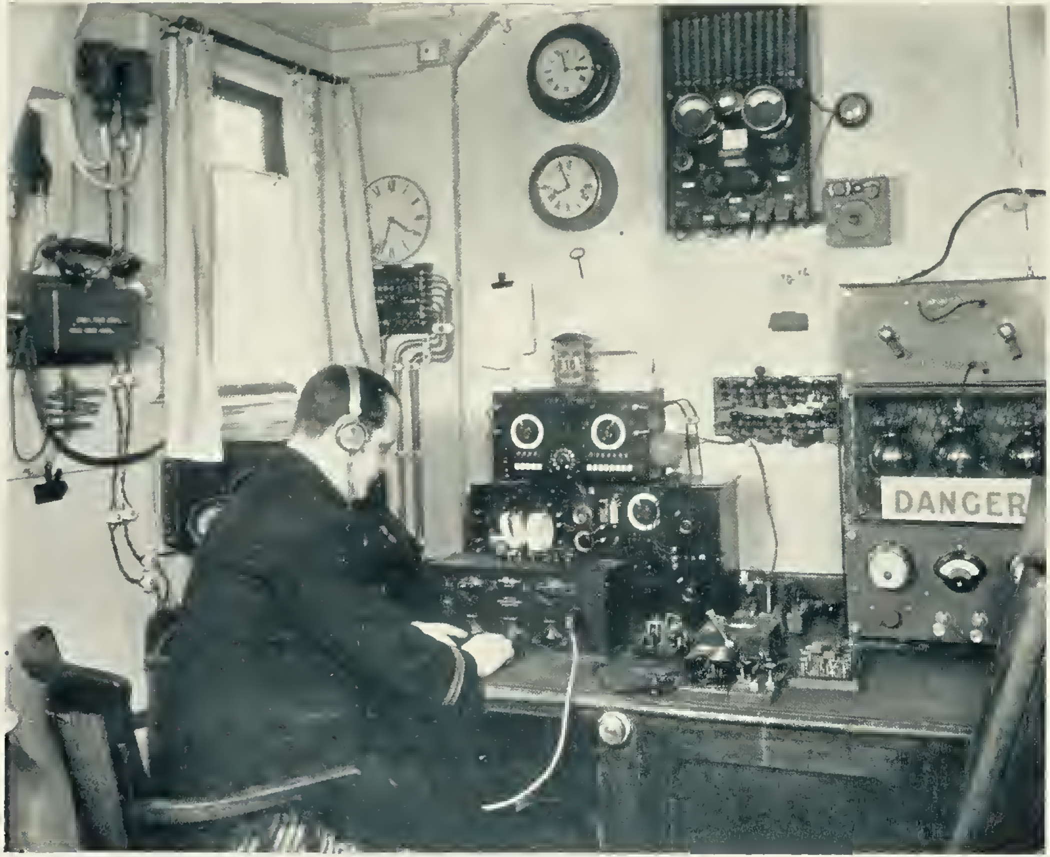
Signalling with Flags.—When the weather is clear, signalling at short visual distances is often done by wigwagging, that is, by means of manually waved flags according to a code. At longer distances, as when ships pass each other at sea, they use the *International Code Signals,* that is, flags of various designs are run up to the masthead. This scheme enables their captains to understand tongues that are entirely different. When a ship is in distress in the daytime and needs help, as, for example, if she should run on a bar or a rock near shore, she will fire her guns every minute, hoist flags showing N. C., and a distance signal made of a square flag with a ball above or below it. If another ship is standing by, she will signal her with the submarine bell, and if she is out at sea she will send out an *S. O. S.* call by wireless telegraphy.

The Search-light.—An electric arc light, set in the focus of a silvered reflector and forming what is called a *search-light,* is fixed to the bridge so that a powerful beam of light can be thrown in front or on either side of the ship. It is seldom used under normal running conditions at night, but if any danger looms up in the immediate vicinity of the ship it can be turned on it to advantage.

How Submarine Signals Work.—All large ships are fitted with *submarine signalling* equipment. It consists of an apparatus which sends out and receives sound signals by, in and through the water, and it is chiefly useful when the ship is in proximity with other ships and a fog envelops them. The principle it works on is this: You must have noticed when you have been in swimming and you were under the water that when some one else struck two stones together, also under the water and a good ways off, it sounded to you just as though they clicked quite close to your ear.

Now, the reason it does so is because sound waves travel about four times as fast and ten times farther in water, with the same expenditure of power, as they do in air, and, what is more, there is no wind under the surface of the water to interfere with its vibrations.

The Wireless Telegraph System.—The last and greatest safety device of all is the *wireless telegraph.* The long distances to which messages can be sent make it of incalculable service in calling to other ships for help when the one you are on is in distress. Now,



Courtesy Cunard Steamship Co.

FIG. 41. TYPICAL RADIO ROOM ON SHIPBOARD.

while sound travels in the neighbourhood of one thousand feet per second, electric waves, which are set up and sent out by the sender of a wireless telegraph system, travel at a speed of one hundred and eighty-six thousand five hundred miles per second, and instead of reaching out for a distance of, say, fifteen miles at most, as sound waves do, electric waves travel for hundreds of miles in every direction from the station that is sending them out.

Go up to the boat deck and look overhead, and you will see two or more wires stretched between the fore and aft mastheads, and a vertical wire connected with them. This system of parallel wires forms an *aerial,* as it is called, and the free end of the vertical wire is termed a *leading-in wire,* and this goes through an insulator into the wireless room. It is connected with the transmitter and the receiver by a throwover switch.

The wireless transmitter is designed only for telegraphy, that is, to send the dot and dash code, and it consists of two or more vacuum tubes, for setting up the electric oscillations and which, in turn, send out the electric waves, together with the necessary sources of current to energize them, the inductance coils, condensers, etc. It is shown in the case marked DANGER on the right of the table in Fig. 41. The set includes both a short and a long wave receiver, and the operator receives the messages with a pair of head-phones.

Life-preservers and Drills.—A *life-preserver* is an apparatus which is so made that it will keep you afloat in water and, it follows, prevent you from drowning. Life-preservers are made in various forms, but one of the most common is the cork-filled jacket. You will find one in your stateroom and, while the chances are you will never need it, still it is a good scheme to read the directions and put it on so that in an emergency you will know just how to do it. Other safety arrangements are fire, lifeboat and pump drills by the crew, but these are performed while the ship is in port and, hence, the passengers are never disturbed by them while at sea.

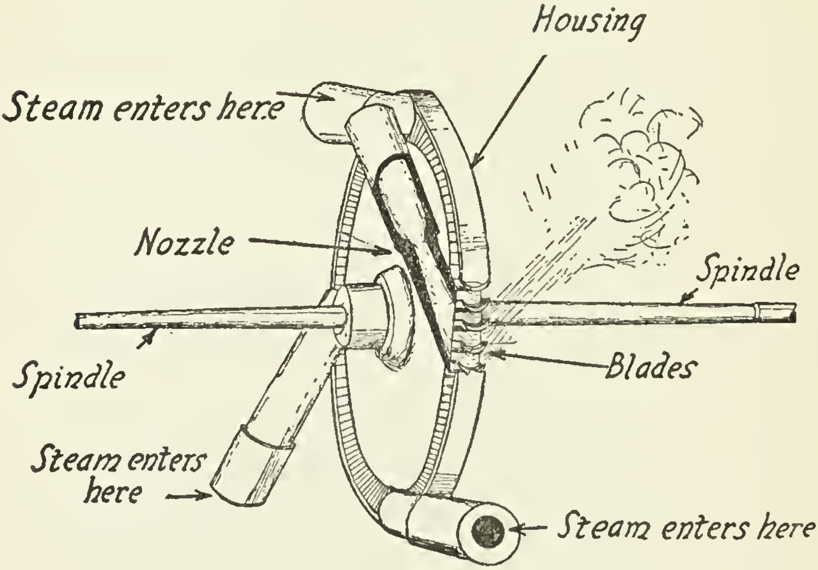


Fig. 42.—How the Steam Turbine Works

Speed Comes Next.—The Battery of Boilers.—After safety comes speed, and in order to obtain it a power-plant of great size is needed. To drive the *Mauretania* through the water on her speed-breaking record it took a battery of twenty-five boilers, and all of these, except two, have four furnaces at each end in which coal is burned.

Kinds of Marine Engines.—There are two general kinds of engines that are used to speed the ocean greyhounds through the deep, and these are (1) the *reciprocating engine,* and (2) the *steam turbine.* Whichever kind is used it is, of course, energized by the steam generated by the boilers, and they drive two, three, or four propellers, or *screws,* as they are more often called.

A reciprocating engine is one that has a piston moving in each cylinder like that of a locomotive, and the way it works is shown in Fig. 14, in Part I, Chapter IV. A turbine engine, or steam turbine, to give it its proper name, is one in which the steam acts on little blades or vanes that are fixed to the shaft and drives it round just as the wind drives a windmill round. The principle of the turbine is shown in Fig. 42.

The steam turbine has the advantage over the reciprocating engine in that it takes up only about one-fourth as much room as the latter, uses a little less steam and is supposed to do away with the vibration of the ship. The *Mauretania* has four turbines, and these develop a total of nearly seventy thousand horsepower.

Other Machinery.—Besides the power-plant, there are fifty or more other machines of all kinds, and for every thinkable purpose, from dynamos for lighting up the ship to ice machines for keeping down the temperature of the food supplies, and from motors for running the elevators to pumps for supplying fresh water for drinking purposes. Tell some officer or the purser you are interested in these mechanical devices and he will delegate some one who knows all about them to show and explain them to you.

Comfort All the Time.—Bilge Keels.—The *keel* of a ship is the ridge that runs along the bottom of it from the bow to the stern-post. The *bilge* is that part of a ship's hull or body that extends about half-way between the keel and the water line, and, finally, a *bilge keel* is a ridge or a keel that is built out from the keel proper and runs parallel with it on opposite sides of the bottom of the ship. The purpose of these bilge keels is to keep the ship from rolling in a rough sea, and this greatly assists the pneumogastric nerve to preserve its equilibrium, but, unfortunately, it does not always do so to an extent necessary to prevent its owner from having a desire to hang over the rail or to dive into his berth.

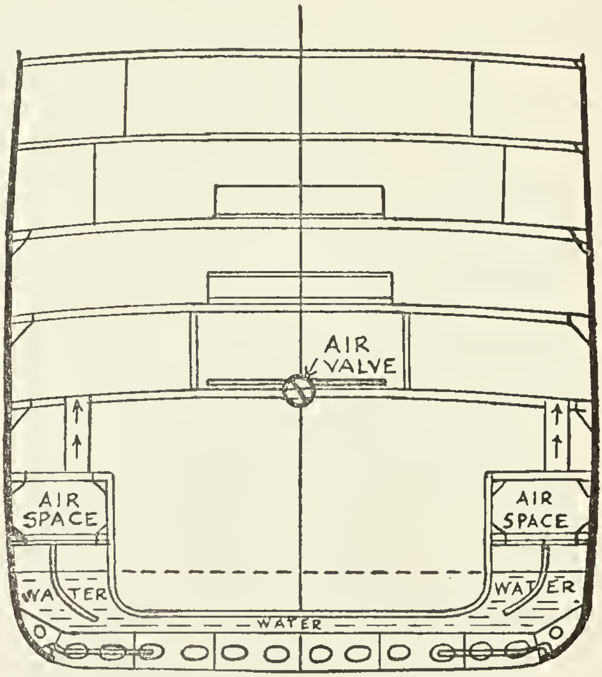


Fig. 43.—The Anti-Rolling Tanks

Anti-rolling Tanks.—This being true, an apparatus termed *anti-rolling tanks* is installed in the hull of the ship to give it greater steadiness. The Frahm anti-rolling apparatus, which is shown in Fig. 43, is formed of two water-tanks divided into compartments, and these are placed amidships on opposite sides of the ship and connected across the top by air lines, or *air trunks,* as they are called, and across the bottom by water passages. The motion of the ship is checked by the water flowing from one tank into the other through the passages, and this automatically prevents the ship from rolling.

These are the chief devices that make for safety, speed and a quiet pneumogastric nerve and, hence, comfort. Having the latter, you can then take an interest in and be soothed by the magnificent furnishings, the elevator service, the scientific heating, ventilating and plumbing systems, and last, but not least, in the high standard of *cuisine*[6] (pronounced *kwe-zine'*) that makes for the good feeling of the inner man and which is on a par with all of the other regal things.

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[6] This is a French word derived from the Latin *coquine,* which means *kitchen.* It has come to mean the manner or style of cooking.

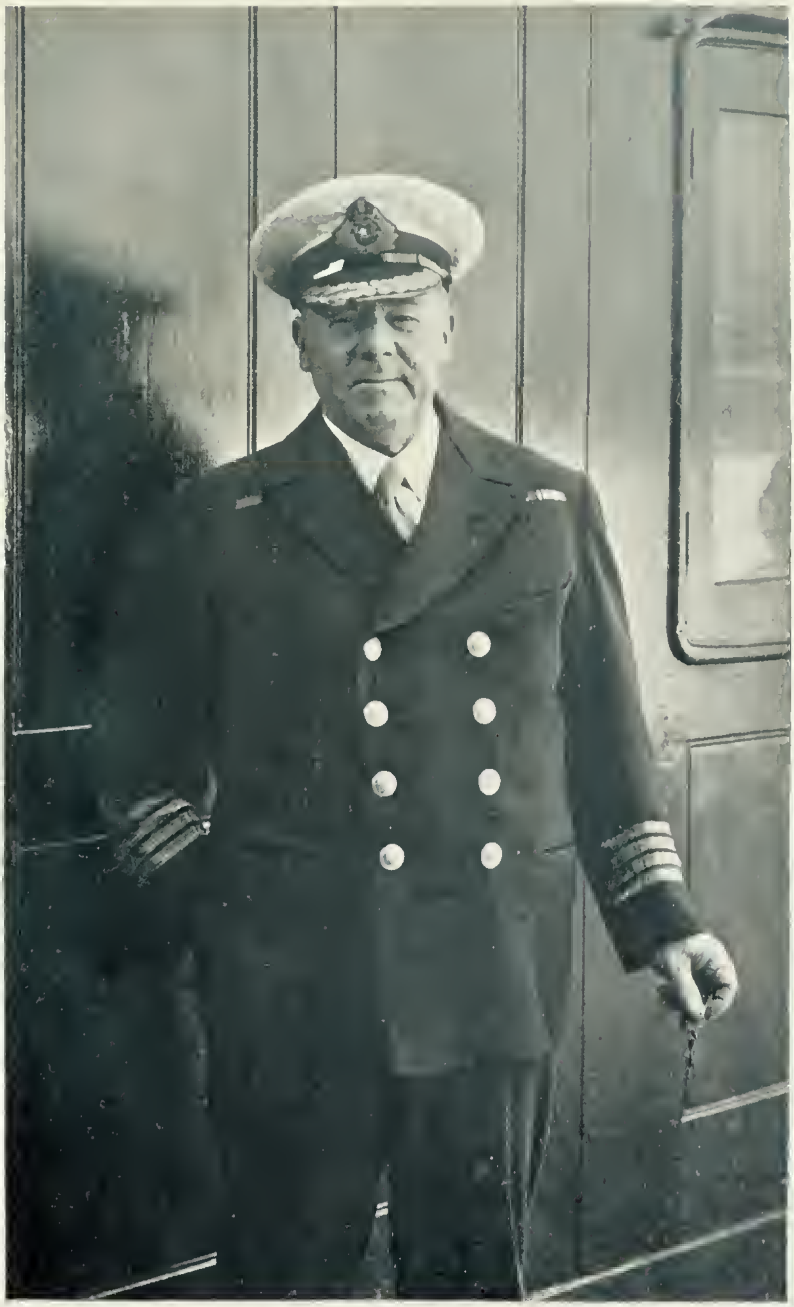
V

THE SHIP'S COMPANY

BY the above title I do not mean the passengers who are travelling for business, health or pleasure, but a far more serious-minded company, and this is the noble crew of the ship. It is surprising the number of men that are needed to navigate the ship safely and at high speed, and to see that every want of the passengers is attended to. The officers of the ship are not of the old sea-dog kind that sailed the wind-jammers of yesteryear, but gallant men who not only know how to navigate a ship but who are also gentlemen, and that of the first water.

The Commander of the Ship.—First there is the *Commander,* or *Captain,* as he is usually called, and a mighty Captain is he, spelled with a capital *C,* for he is in supreme command and holds his ship, its crew, the passengers and the cargo all in the hollow of his hand. His word is the court of last resort on the high seas, and while he carries the great responsibility of the safety of the ship on his shoulders he is usually a very mild-mannered, courteous and genial personage. The Commander of the ship is shown in Fig. 44.

The Staff Captain and His Mates.—Under the Commander is a *Captain of the Staff,* and his mates are half-a-dozen weather-beaten navigators, called the *first officer, second officer,* and so on as they run down the scale in time of service. It is these officers who navi-



Courtesy Cunard Steamship Co.

FIG. 44. THE COMMANDER OF THE SHIP.

gate the ship, which means that it is their business to find the ship's position at sea and to set its course from the observations they make, as you will read in detail in the next chapter. Officers and deck boys are shown in Fig. 45.

What the Quartermasters Do.—This course, which is set by the navigators every twenty-four hours, or oftener if needs be, is given to the *quartermaster,* a petty officer, whose duty it is to steer the ship according to the course thus plotted by means of the compass. Now, the rudder of a giant ship weighs in the neighbourhood of ten tons, and it is moved to and fro by a steam engine which is under the control of a quartermaster and who operates it by a small spoked wheel which is about the size of the steering-wheel of a sailing yacht. The quartermaster also looks after the binnacle, the signals and other like duties.

The Able-bodied Seamen.—The *boatswain,* called the *bo'sun* ever since Noah commanded the ark, directs the crew of *able-bodied seamen*—the last of their kind—and even the glamor of these seasoned salts has been rubbed off since the raw old days, for now, instead of reefing the sails of a clipper ship, their chief work is to polish the brass of the modern steamer. Aye, aye, sir!

The Chief Engineer and His Aides.—It takes a Chief Engineer, thirty-five assistant engineers, and twenty-five oilers under him to keep the giant engines of a ship like the *Mauretania* going, though these are not on duty all of the time, but they work in shifts of eight hours each. Then there are over two hundred firemen who shovel nearly fifteen hundred tons of coal every twenty-four hours into the twenty-five seething furnaces to keep up enough steam to run the engines.

These firemen work in four-hour shifts, for the work they do is the hardest that falls to the lot of men today, for neither science nor invention have reached them yet. Fig. 46 is a picture of the Chief Engineer and a few of his assistants.

Who the Purser Is.—When you go to a hotel you transact your business with one or more clerks, and when you are aboard ship you tell your troubles to the *purser*. The purser is the ship's business manager, treasurer and chief clerk all rolled into a bundle of geniality and information, so when in doubt ask the purser, and if you haven't any doubts, engage him in conversation anyway—at least, that seems to be what all of the other passengers do whenever the opportunity presents itself.

The Ship's Doctors.—Nearly all steamship companies provide the services of the ship's doctor free, gratis and with the compliments of the season, that is, if you should happen to get sick while on board. If you should have the doctor treat you for any illness that you have not contracted on board he is authorized to collect the usual fee. The customary way, though, is for the passengers to pay for whatever service the doctor renders you under any condition or circumstance.

On large ships there are usually three doctors employed, and there are three hospitals, two being for those suffering from ordinary ailments and the third for those who have developed contagious diseases. The moment a passenger is suspected of having a contagious disease he is taken to the latter hospital, where he is attended by the third doctor.

The Chef and His Merry Stewards.—To cook and to serve meals for over three thousand five hundred passengers and a crew of nearly one thousand more, which means a total of upwards of fourteen thousand meals a day, to say nothing of the lunches and teas served on the deck in between times, is a man's job, but every ship has a *Chef*[1] who is fully equal to the occasion. The *Chef* is like the Staff Captain and the Chief Engineer in that he simply bosses the job and draws a big salary while he lets fifty second cooks prepare the food and a couple of hundred table stewards see that it is properly served. Fig. 47 shows the boss of the cuisine, otherwise the *Chef*.

When I tell you that forty cows, ten calves, eighty sheep, sixty lambs, one hundred and thirty pigs, two thousand chickens, three hundred and fifty ducks, one hundred and fifty turkeys, ninety geese, two hundred pheasants, four hundred pigeons, two hundred and fifty grouse, eight hundred quail and two hundred snipe are needed to supply the inner man of the passengers and crew on the *Mauretania* and other ships of like size for a single trip, and that this is only to fill the meat orders, you will get a faint glimmering of why the *Chef* needs the array of cooks and stewards he has under him to see that everybody is properly fed.

A Few Others of the Crew.—To get in all of the crew the members of the band and orchestra must not be forgotten, and these men who *double in brass* are shown in Fig. 48. Then there is a rift of stewardesses, telegraph and telephone operators, elevator men, and enough printers who print menus, passenger lists and a daily paper (see Fig. 49) to supply reading matter for an incorporated town of five thousand souls.

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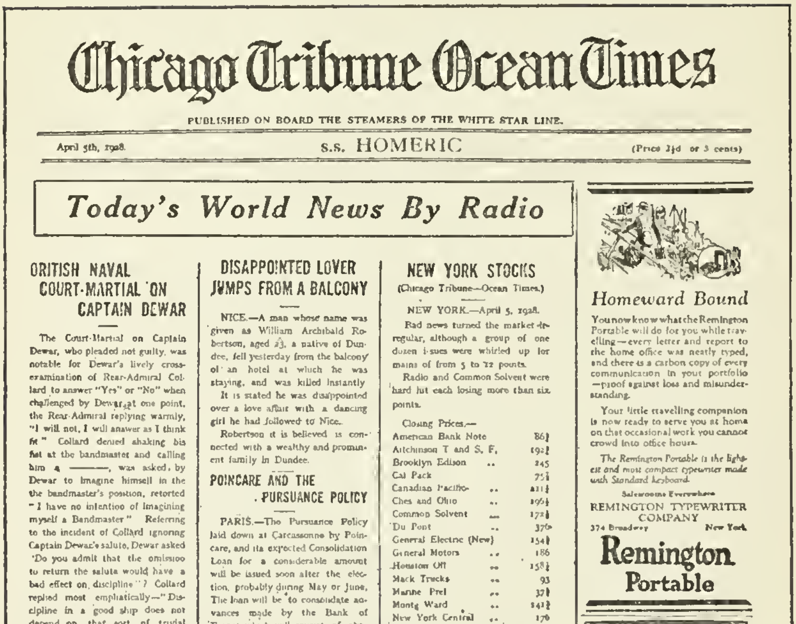
[1] Pronounced *shef*. It is the French word for *chief*, and he is the head cook of a restaurant, club or ship.



Chicago Tribune Ocean Times

PUBLISHED ON BOARD THE STEAMERS OF THE WHITE STAR LINE.

April 5th, 1928. S.S. HOMERIC (Price 2½d or 5 cents)

Today's World News By Radio

ORITISH NAVAL COURT-MARTIAL ON CAPTAIN DEWAR

The Court-Martial on Captain Dewar, who pleaded not guilty, was notable for Dewar's lively cross-examination of Rear-Admiral Collard to answer "Yes" or "No" when challenged by Dewar at one point, the Rear-Admiral replying warmly, "I will not, I will answer as I think fit." Collard denied shaking his fist at the bandmaster and calling him a ———, was asked, by Dewar to imagine himself in the the bandmaster's position, retorted "I have no intention of imagining myself a Bandmaster." Referring to the incident of Collard ignoring Captain Dewar's salute, Dewar asked "Do you admit that the omission to return the salute would have a bad effect on discipline"? Collard replied most emphatically—"Discipline in a good ship does not depend on that sort of trivial rubbish." Replying to the prosecutor Collard said "My relations in Royal Oak were correct but not intimate, I did not say that I was fed up with the ship, but with my Flag-Captain. One wants a real friend who will on every occasion put his Admiral's interests before everything else in the world." "Before the interests of the Service," inquired Dewar. Collard answered "Admiral's interests are those of the Service." Adjourned.

AMERICAN'S NOVEL DISTRIBUTION OF WINNINGS

NICE.—People passing by one of the leading hotels in Cannes had a pleasant surprise yesterday when suddenly they found a shower of twenty and one hundred-franc metal checks from the Casino baccarat rooms raining down around them. A moment later tokens by the handful and thousand-franc notes came floating down from one of the hotel windows. This unexpected distribution of wealth was made by an American visitor who had won a large sum at the baccarat tables.

DISAPPOINTED LOVER JUMPS FROM A BALCONY

NICE.—A man whose name was given as William Archibald Robertson, aged 23, a native of Dundee, fell yesterday from the balcony of an hotel at which he was staying, and was killed instantly.

It is stated he was disappointed over a love affair with a dancing girl he had followed to Nice.

Robertson it is believed is connected with a wealthy and prominent family in Dundee.

POINCARE AND THE PURSUANCE POLICY

PARIS.—The Pursuance Policy laid down at Carcassonne by Poincare, and its expected Consolidation Loan for a considerable amount will be issued soon after the election, probably during May or June. The loan will be to consolidate advances made by the Bank of France which will consist of non-negotiable treasury bonds held by that institution, this is one more step towards the stabilisation of the franc.

FALSE RUMOURS ABOUT TROTSKY

There are conflicting rumours about Trotsky, who is now exiled at Verny, Turkestan. One report says Trotsky was wounded by an Armenian, another declares he was shot dead. The Soviet, Authorities pretend to know nothing of the matter.

NEWS IN BRIEF

LONDON.—The condition of Viscount Trematon it was stated last evening is still serious.

DURBAN.—Jock Brews beat his brother Syd, the holder, by one stroke in the South African Golf Championship yesterday.

MADRID.—A train was derailed at Heuvla and wrecked, three persons were killed.

NEW YORK STOCKS

(Chicago Tribune—Ocean Times.)

NEW YORK.—April 5, 1928.

Bad news turned the market irregular, although a group of one dozen issues were whirled up for gains of from 5 to 12 points.

Radio and Common Solvent were hard hit each losing more than six points.

Closing Prices.—

American Bank Note	86[illegible]
Aitchinson T and S. F.	192[illegible]
Brooklyn Edison ..	245
Cal Pack	75[illegible]
Canadian Pacific ..	211[illegible]
Ches and Ohio ..	196[illegible]
Common Solvent ..	172[illegible]
Du Pont ..	376
General Electric (New)	154[illegible]
General Motors ..	186
Houston Oil ..	158[illegible]
Mack Trucks ..	93
Marine Pref ..	37[illegible]
Montg Ward ..	141[illegible]
New York Central ..	170
Norfolk and West ..	189[illegible]
Penn R.R. ..	69[illegible]
Public Service ..	4[illegible]
Radio Corporation ..	193[illegible]
Reynolds T. B. ..	143
Sears Rowe ..	100
Timken Roller Bearing	129[illegible]
United States Steel ..	146[illegible]
Woolworths ..	185[illegible]

Total Sales: 3,200,500

Call money, 5 p.c.

FOREIGN EXCHANGES.

(Chicago Tribune—Ocean Times).

Brittain	4/87[illegible]	France	3/93[illegible]
Denmark	26/82	Italy	5/28
Sweden	26/83	Norway	26/72
Holland	40/28	Germany	23/91[illegible]
Austria	14/12[illegible]	Argentine	42/83
Belgium	13/96[illegible]	Brazil	12/06
Jugo-Slav	1/76[illegible]	Czecho-S.	2/96[illegible]
Chile	12/15	Peru	3/95
Greece	—	Switzerland	19/27

ELECTRIC LIGHT BATH.

Two Fully Equipped Electric Light Baths are situated on Deck C.

Particulars can be obtained from the Enquiry Office.

Homeward Bound

You now know what the Remington Portable will do for you while travelling—every letter and report to the home office was neatly typed, and there is a carbon copy of every communication in your portfolio—proof against loss and misunderstanding.

Your little travelling companion is now ready to serve you at home on that occasional work you cannot crowd into office hours.

The Remington Portable is the lightest and most compact typewriter made with Standard keyboard.

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We take care of your baggage through the customs . . . relieve you of burdensome details at the dock . . . and expedite your home coming. Just one of the many advantages we offer our guests beyond the call of "duty."

Make room reservations by wireless at our expense.

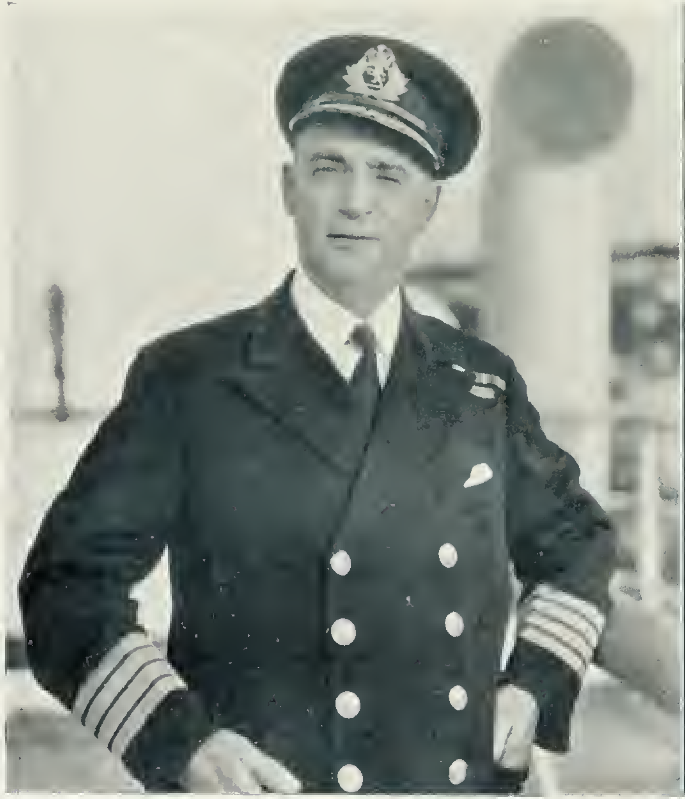
The Ambassador

[illegible]

PARK AVENUE AT 51st STREET
NEW YORK

THE AMBASSADOR
Atlantic City Los Angeles

FIG. 49.—A NEWSPAPER PRINTED AT SEA



Courtesy Cunard Steamship Co.

FIG. 46. THE CHIEF ENGINEER.

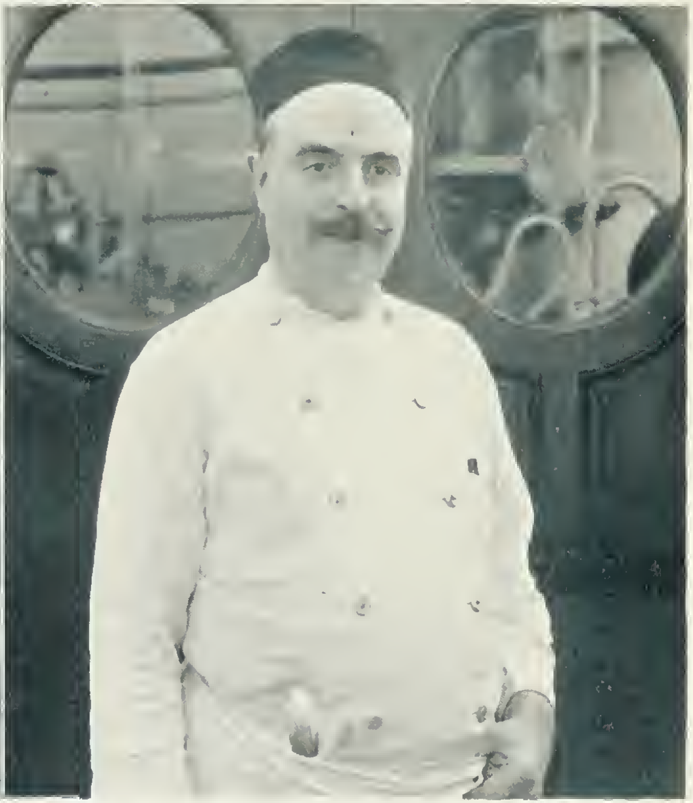


FIG. 47. CHEF DE CUISINE.

VI

THE TRACKLESS SEA

VERY few travellers on ocean liners have the faintest idea as to how a ship is sailed from one port to another across the so-called trackless sea. And you may lay to it that the majority of travellers not only do not know how a ship is sailed, but they don't care much how it is done as long as she makes a fast run and a good landfall.[1] To know and to care, though, adds mightily to one's good opinion of himself and to his fellow-traveller's respect for him, especially if he can explain it in simple language.

About Nautical Science.—To be able to find the position of a ship at sea and *set her course,* which means to mark her path on a *chart*[2] she is to be steered over for the succeeding twenty-four hours is the duty, as I have previously said, of the navigating officers. Now, the art of navigation is based on the sciences of astronomy and mathematics, and for this reason nearly every one, whether they ever smelled the sea or not, think it is altogether too deep for them to understand, and, hence, they are more than willing to leave it to the officers who are paid for knowing how to do so.

But please stand by until you get this; the science of navigation is very like the multiplication table, in that it was worked out by some old *math prof.*, or a number of them, rather, and put into a comparatively simple form, so all that you have to do is to know how to use a *sextant* and the *Nautical Almanac,* and these will be described presently.

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[1] When the navigator sights land at the point and time he calculated he makes what is called a *good landfall.*

[2] A chart is a marine map.

Finding Your Bearings at Home.—You can always know where you are when in your home town by some such landmark as the Dutch Reformed Church, and you can direct a stranger in the country by telling him that the place he wants to go to is about a mile west of the little red schoolhouse. But when you are at sea and far out of the sight of land, things are very different, for you are always in the centre of a circle where the earth and sky seem to meet, and your only positional marks are the sun, the moon and the stars in the bowl of the sky, and right good marks they are, too, if only you know how to use them.

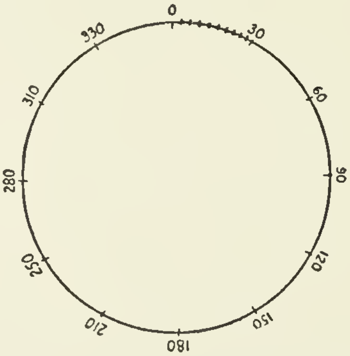
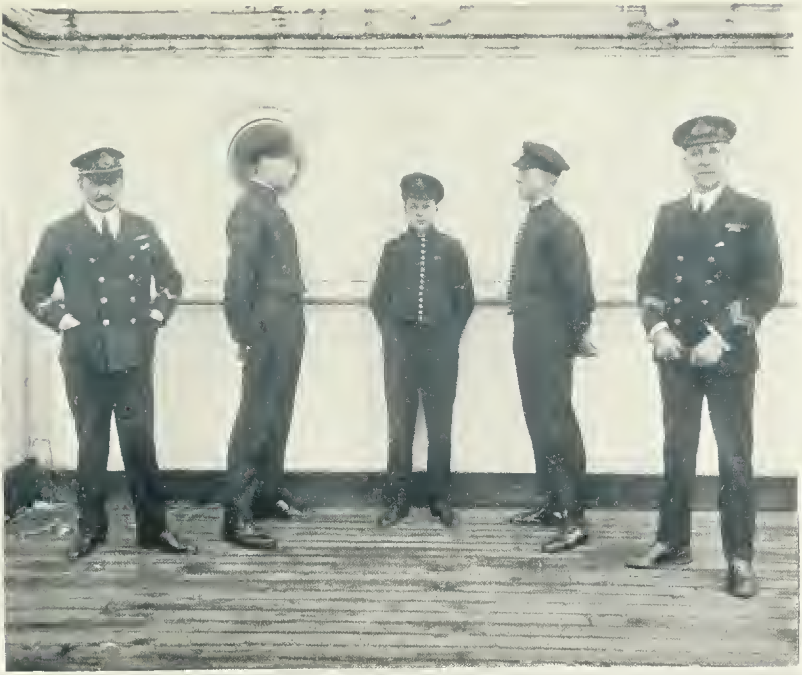
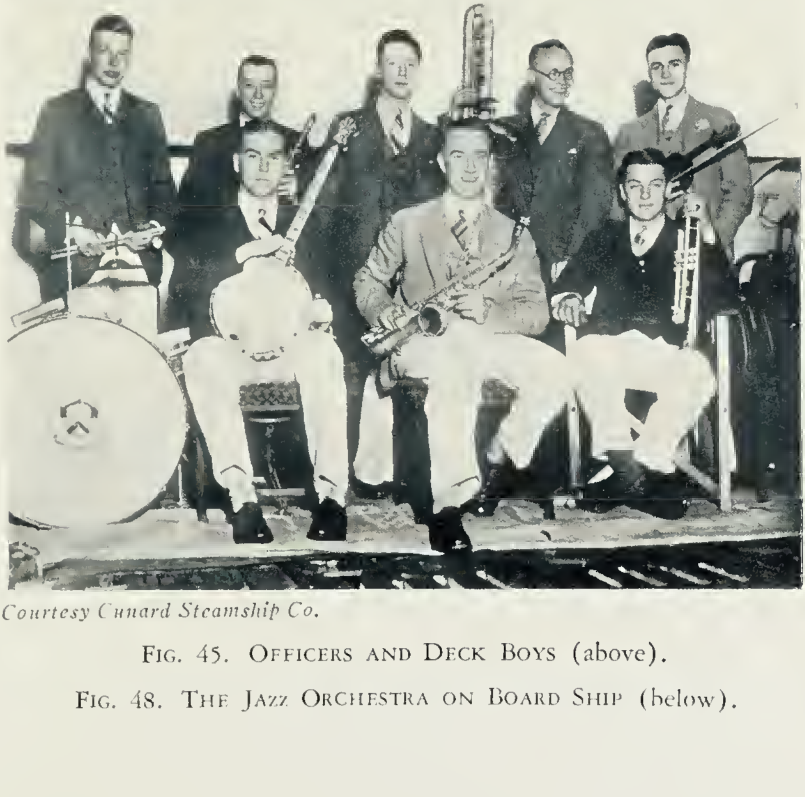


FIG. 50-A.—THE CIRCLE AND DEGREES

Time and the Round World.—There may be a few lubbers still alive who, like Wilbur Voliva, think that the earth is flat, but if they would take passage on one of the big ships that make regular round-the-world





Courtesy Cunard Steamship Co.

FIG. 45. OFFICERS AND DECK BOYS (above).

FIG. 48. THE JAZZ ORCHESTRA ON BOARD SHIP (below).

voyages and return to the port they started from, sailing east or west all the time, they would certainly be convinced that this old earth of ours is as round as an orange.

Now, it is usual to divide a circle into three hundred and sixty equal parts or spaces, and each space is called a *degree,* see *A* in Fig. 50. Each degree is further divided into sixty equal parts or spaces, and each one of these is called a *minute,* and, finally, each minute is divided into sixty equal spaces, and each of these is called a *second.* Now, since the earth is round, it is divided into ninety degrees north and ninety degrees south of the equator to the poles on one side and an equal number of degrees north and south of it on the

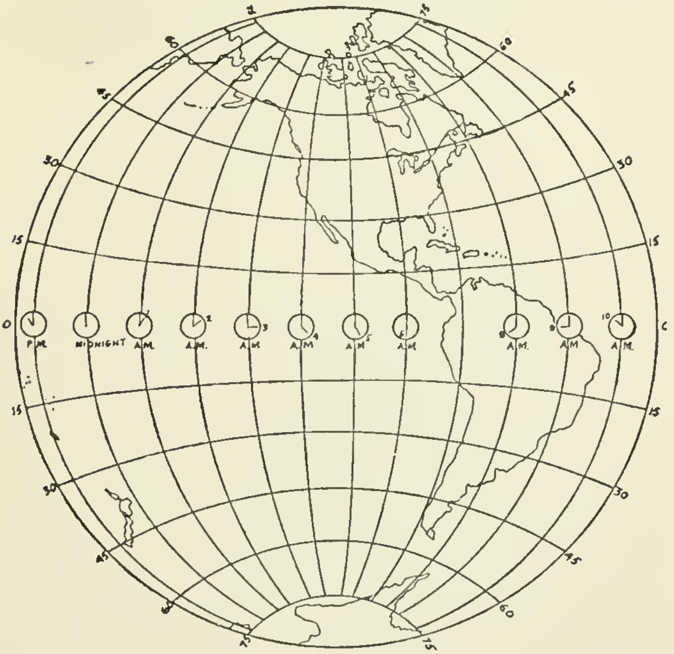


Fig. 50-B.—The Round World

opposite side, making a total of three hundred and sixty degrees, and from these degrees the *latitude,* that is, the distance north and south of the equator on a meridian, can be obtained as shown at *B.*

In the same manner the earth is divided into one hundred and eighty degrees east and one hundred and eighty degrees[3] west of Greenwich, England, and from these degrees the *longitude,* that is, the distance east and west of Greenwich, can be found. For this reason sea distances are reckoned in *degrees,* but it is easy to change degrees into *miles* by a simple rule which I shall give you a little farther on. Further, each point or place on the earth's surface will turn fifteen degrees, which is one-twenty-fourth of three hundred and sixty degrees, in one hour, and this, of course, makes the

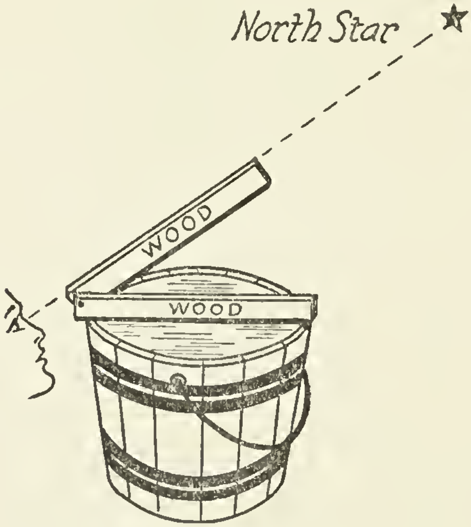


FIG. 51-A.—FINDING LATITUDE WITH STICKS AND BUCKET

sun rise one hour earlier for every fifteen degrees that the point or place is east of where you are and, it follows, it is one hour later for every fifteen degrees that is west of you, hence, every fifteen degrees east or west make a difference in time, fast or slow of one hour.

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[3] These equal 360 degrees.

Finding Your Position at Sea.—How to Find Latitude.—If you will make the following experiment you can find not only the latitude of the place you are in,

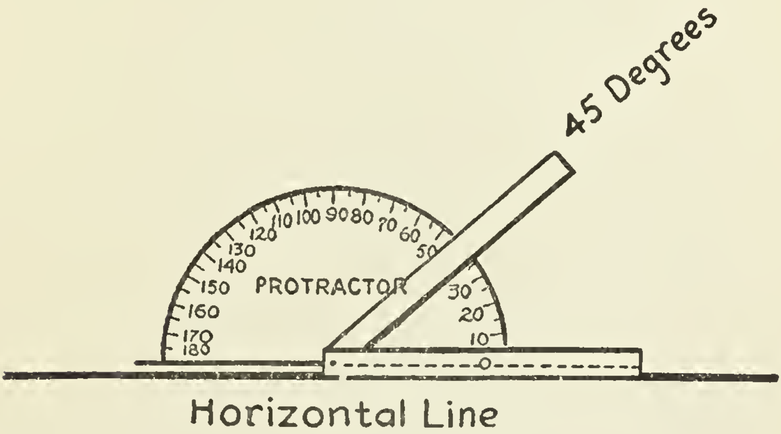

Fig. 51-B.—Finding Latitude with Sticks and Protractor

but you will understand exactly how latitude is found at sea. Take two smooth sticks of wood, each one of which is about one foot long, and put a screw through them at one end so that they will open and shut like a pocket-knife. This done, fill a bucket brimful of water and set it on a level surface outdoors at a point where you can see the North Star. Now, when it is dark go out and place the hinged sticks across the bucket, as shown in Fig. 51-A, and then raise one of the sticks until you can sight the North Star along the edge of it with your eye.

This observation made, take the sticks into the house, and be very careful that you do not change their relative positions and so alter the angle they form. Now, lay a piece of paper on the table, draw a straight line near the bottom of it, and place the stick that was on the bucket on the line you have

FIG. 52.—TAKING THE NOON SIGHT

drawn, and draw another line along the edge of the other stick with which you sighted the North Star. The last step is to take a *protractor,* which is simply the half of a circle cut out of paper or brass with one hundred and eighty degrees marked on it, and measure the angular distance in degrees between the two lines with it, as shown at *B* in Fig. 51, and the number of degrees will be the latitude, nearly, of the place you are at.

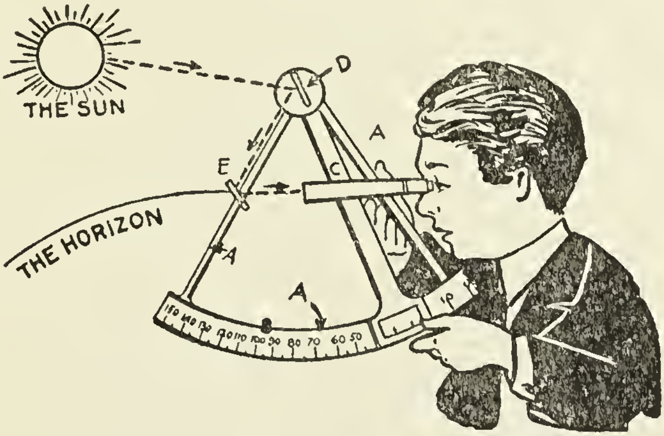

Fig. 53.—How the Sextant Works

The Noon Sight.—If you should be near the bridge of your ship just before noon on a day when the sun is shining you will see two or more of the navigating officers, each of whom is holding a peculiar-shaped instrument to his eye and looking through it at the sun, as shown in Fig. 52. These officers are taking the *noon sight,* or *shooting the sun,* as it is called in the vernacular, that is, they are finding the latitude the ship is in with a *sextant.* This is an instrument that is worked on the same principle as the sticks and the protractor, that is, it measures angles in degrees, but instead of forming the angle between a pair of sticks two beams of light are used, and instead of sighting the North Star, the sun is sighted, and instead of using a level bucket of water, the *horizon* is used.

How the Sextant is Made and Used.—The sextant is formed of a metal frame which has the sixth part of a brass circle on one side, and this is marked off into degrees like a protractor. To the movable arm is firmly fixed an *index mirror,* as it is called, and a telescope is secured to the other side of the frame, and all of which is clearly shown in Fig. 53. Only one-half of the *horizon mirror* is silvered, the other half being left clear, so that when you, or a navigator, takes the *noon sight* with the sextant you, or he, will not only see the rays of the sun through the telescope as they are reflected from the index mirror to the silvered part of the *horizon mirror,* but you, or he, will also see the horizon through the clear part of the horizon mirror at the

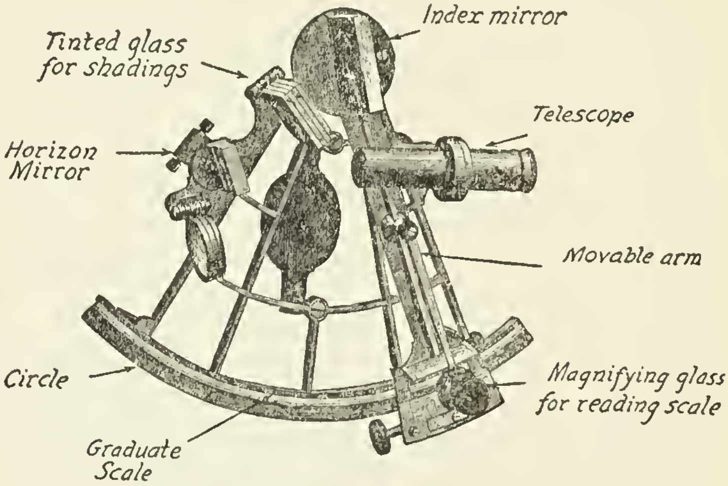

Fig. 54.—A Mariner's Sextant

same time, that is, if the index mirror is turned to the right position, and this is done by moving the arm over the graduated scale.

When this is done the angle formed by the beam of light that is reflected from the sun and that reflected by the horizon can be read directly on the *index of the circle,* which is that small part of the scale that is under the arm, and in this way the *altitude,* or height, of the sun, moon or stars can be measured. A regulation ship's sextant is shown in Fig. 54.

The reason that the navigator takes the noon sight is because the sun is then on the meridian and it is noon, *sun-time,* on the ship. So he begins sighting the sun through the telescope of his sextant a few minutes before noon, and he keeps watching and adjusting it as long as the sun gets higher, but the instant it crosses the meridian it begins to go down, and then he quits observing and *reads* the index of his sextant.

Different from finding the latitude by the North Star, which is directly over the North Pole, and, hence, is always in the same position in the sky, to find the latitude of the ship by the sun the distance of the latter from the equator that the observation is made, or its *declination,* as it is called, must be known by the navigator, and this he gets from the *Nautical Almanac,*[4] which gives the sun's declination for every day in the year.

After the navigator has found the sun's declination he subtracts it from the altitude of the sun which he has read on the scale of the sextant, and this will give him, with a few corrections, the latitude of his ship. Should the sun be hidden, the moon or stars can be observed, but this requires what is called an *artificial horizon;* this is a false horizon formed of a level mirror which usually consists of the surface of mercury in a shallow bowl, and placed in a position so that it can be seen at the same time as the moon or star. The declination of these heavenly bodies can also be found in the Nautical Almanac.

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[4] A copy of the *American Nautical Almanac* can be had of the United States Naval Observatory, Washington, D. C.

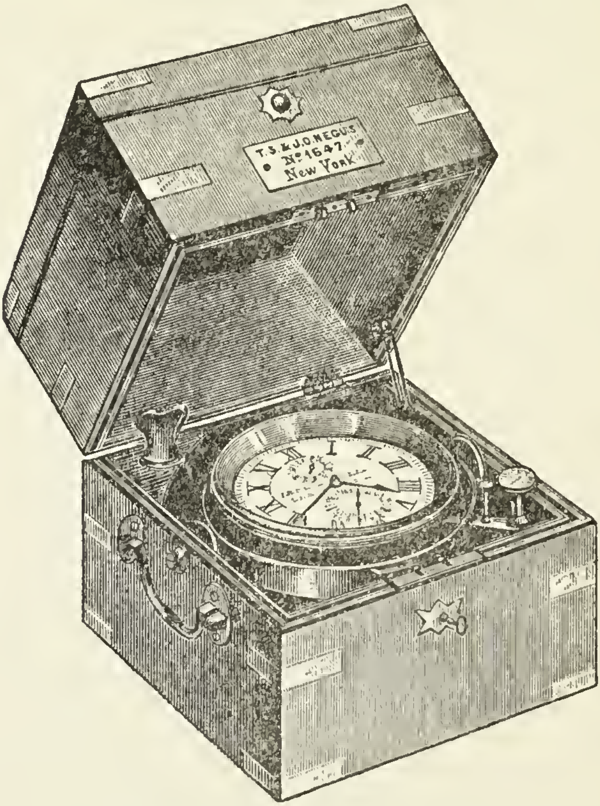


FIG. 55.—A SHIP'S CHRONOMETER

How to Find Longitude.—Having found the latitude of his ship, the next thing for the navigator to do is to find its *longitude,* that is, its position east or west of Greenwich, and this is done by finding the difference in time between the ship at sea and Greenwich, England, which is on the zero meridian. Now, to know the exact time it is at Greenwich, the ship carries a small but very accurate clock which keeps as nearly perfect time as human ingenuity, in the light of present knowledge, permits of.

This clock, which is shown in Fig. 55, is called a *chronometer,* and it is set to keep Greenwich time. When the navigator wants to know the longitude of his ship he notes the difference between sun time, which he gets every day at noon with his sextant, and Greenwich time of the ship's chronometer, and by adding, if he is sailing west, or subtracting, if he is sailing east, this difference in time by fifteen, it gives him the *longitude* of his ship. Having found the latitude and knowing the longitude, it is easy for the navigator to fix on his chart the exact position of his ship.

Setting the Ship's Course.—The chart, as Fig. 56 shows, is a map of that part of the earth's surface over which the ship is sailing, and since the chart is flat and the earth is round, the former does not truly represent the surface of the latter, for all of the meridians (lines of latitude) run parallel with each other instead of being curved and meeting at the poles. This kind of a chart is called *Mercator's chart,* or *Mercator's projection.*

After the position of the ship has been found, that is, its latitude and longitude in degrees, minutes and seconds, by the navigating officer he marks it on the chart and one of the quartermasters steers the ship by it with the compass until the next noon sight, or other observation, is made. Every time a new position of the ship is found she takes what sea-faring men call a *new departure,* and all of the observations together make for a *good landfall,* as making port is called, when and where the navigator calculated it would be, and the voyage, we will say, is at an end.

The Mariner's Compass.—If you magnetize a sewing-needle, lay it on a strip of paper about one-eighth of an inch wide and one and one-half inches long and then carefully float the paper on the surface of a glass of water, it will swing around until it points due north and south. The ordinary compass is based on exactly the same principle, but its construction is a little different, for, instead of the magnetic needle floating on a liquid, it is pivoted on the point of a vertical needle, and this is mounted on a card with *points of the compass,* that is, the various directions, marked in a circle round it.

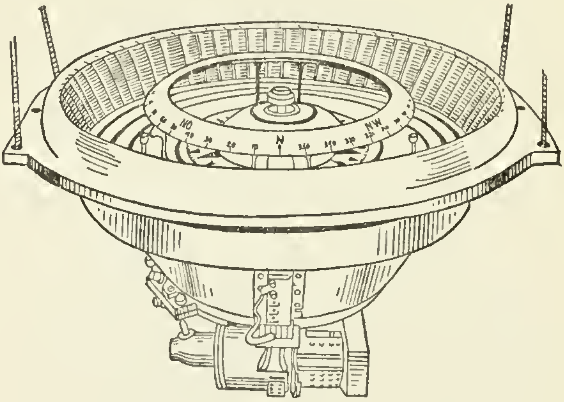
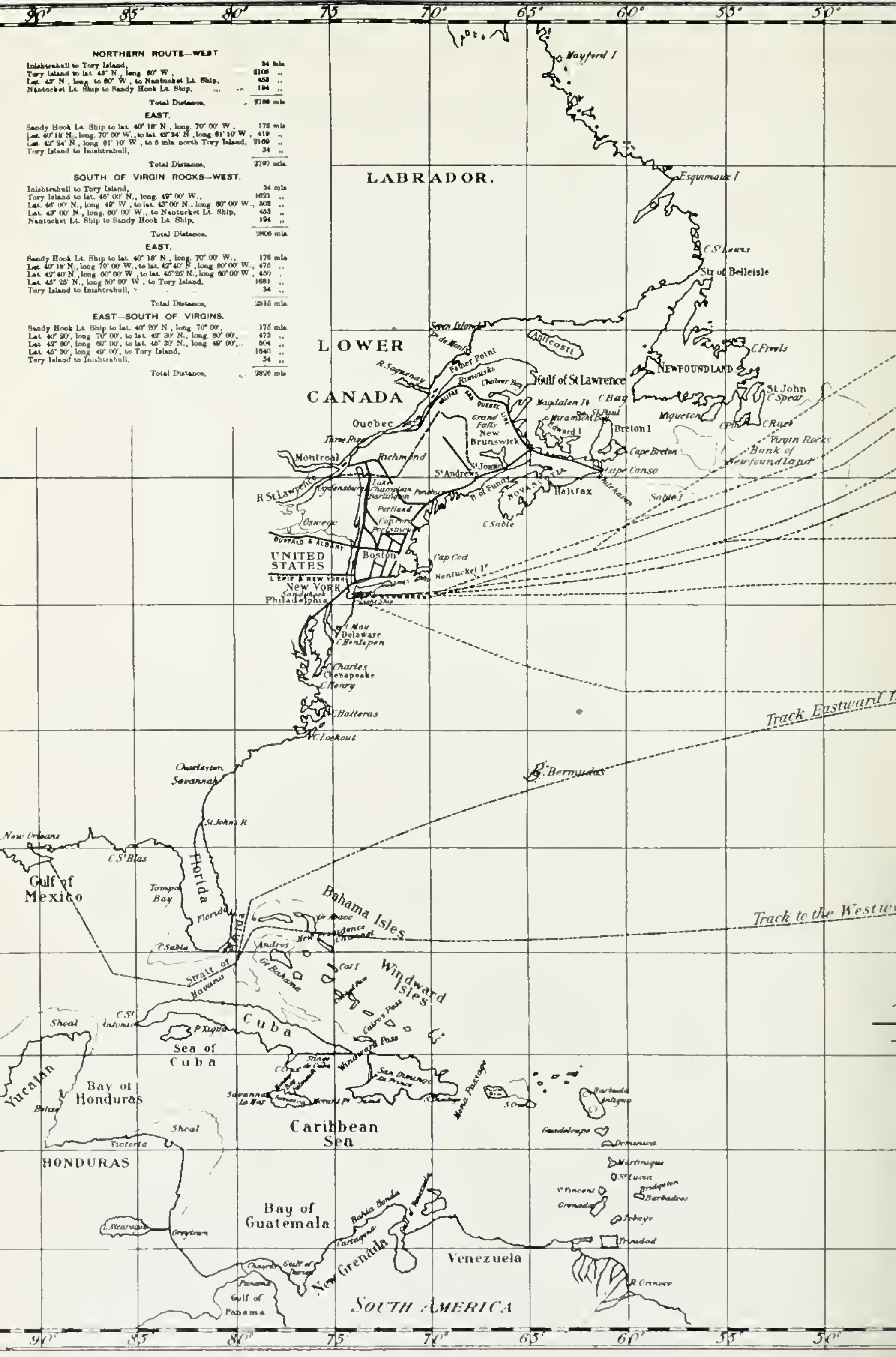


Fig. 57.—A Mariner's Compass

The *mariner's compass* is also based on the same principle as those described above, but its construction also differs somewhat from an ordinary compass, for, instead of the needle swinging over a fixed card,



NORTHERN ROUTE—WEST

Inishtrahull to Tory Island,	34 mls
Tory Island to lat. 43° N., long. 60° W.,	2106 ,,
Lat. 43° N., long. to 60° W., to Nantucket Lt. Ship,	453 ,,
Nantucket Lt. Ship to Sandy Hook Lt. Ship,	194 ,,
Total Distance,	2787 mls

EAST.

Sandy Hook Lt. Ship to lat. 40° 18′ N., long. 70° 00′ W.,	176 mls
Lat. 40° 18′ N., long. 70° 00′ W., to lat. 42° 24′ N., long. 61° 10′ W.,	419 ,,
Lat. 42° 24′ N., long. 61° 10′ W., to 5 mls north Tory Island,	2169 ,,
Tory Island to Inishtrahull,	34 ,,
Total Distance,	2797 mls

SOUTH OF VIRGIN ROCKS—WEST.

Inishtrahull to Tory Island,	34 mls
Tory Island to lat. 46° 00′ N., long. 49° 00′ W.,	1621 ,,
Lat. 46° 00′ N., long. 49° W., to lat. 43° 00′ N., long. 60° 00′ W.,	503 ,,
Lat. 43° 00′ N., long. 60° 00′ W., to Nantucket Lt. Ship,	453 ,,
Nantucket Lt. Ship to Sandy Hook Lt. Ship,	194 ,,
Total Distance,	2805 mls

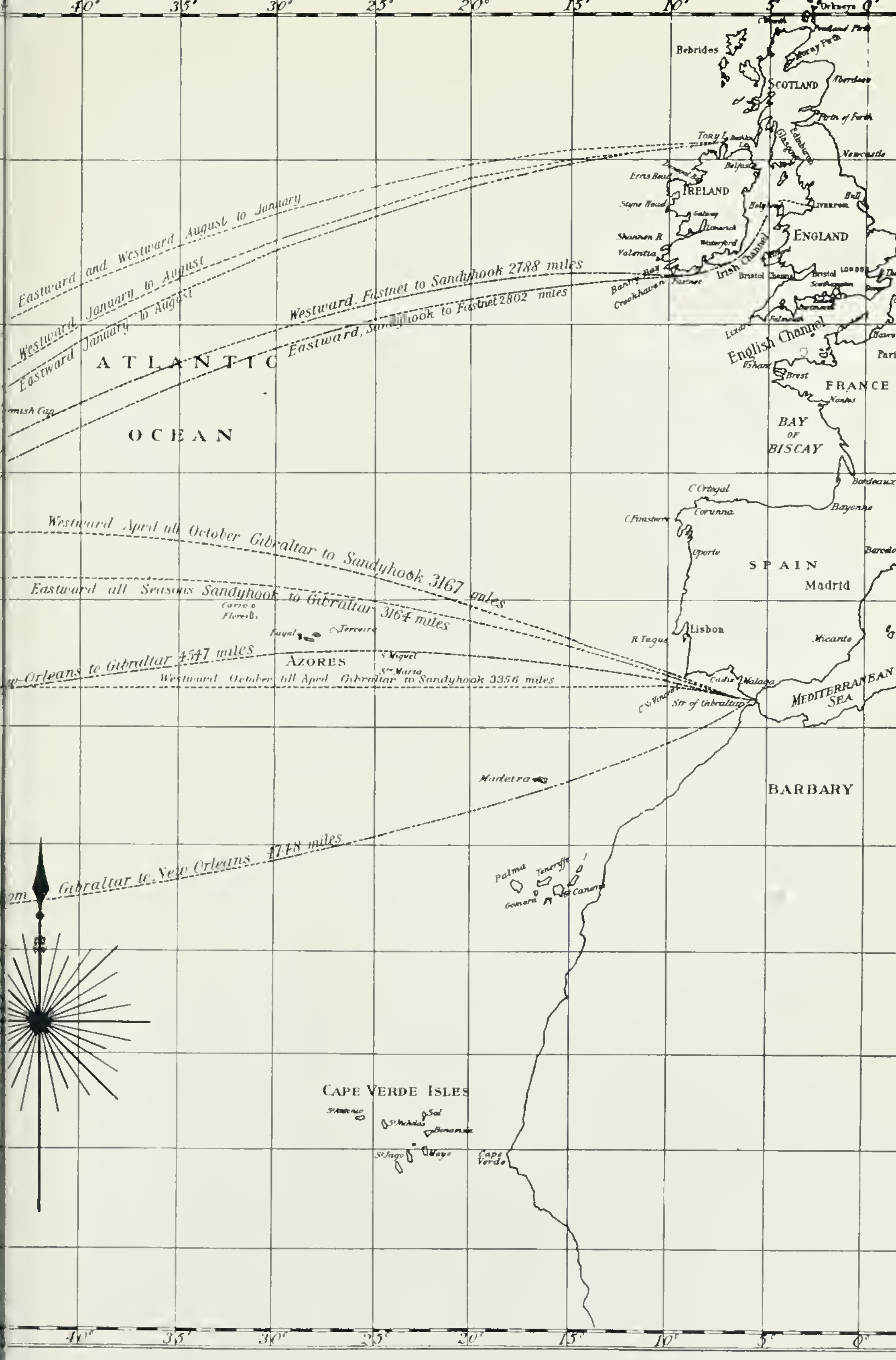
EAST.

Sandy Hook Lt. Ship to lat. 40° 18′ N., long. 70° 00′ W.,	176 mls
Lat. 40° 18′ N., long 70° 00′ W., to lat. 42° 40′ N., long 60° 00′ W.,	475 ,,
Lat. 42° 40′ N., long 60° 00′ W., to lat. 45° 25′ N., long 60° 00′ W.,	450 ,,
Lat. 45° 25′ N., long 50° 00′ W., to Tory Island,	1681 ,,
Tory Island to Inishtrahull,	34 ,,
Total Distance,	2815 mls

EAST—SOUTH OF VIRGINS.

Sandy Hook Lt. Ship to lat. 40° 20′ N., long. 70° 00′,	175 mls
Lat. 40° 20′, long. 70° 00′, to lat. 42° 30′ N., long. 60° 00′,	473 ,,
Lat. 42° 30′, long. 60° 00′, to lat. 45° 30′ N., long. 49° 00′,	604 ,,
Lat. 45° 30′, long. 49° 00′, to Tory Island,	1640 ,,
Tory Island to Inishtrahull,	34 ,,
Total Distance,	2926 mls

Fig. 56. Chart Showing



s' Atlantic Courses.

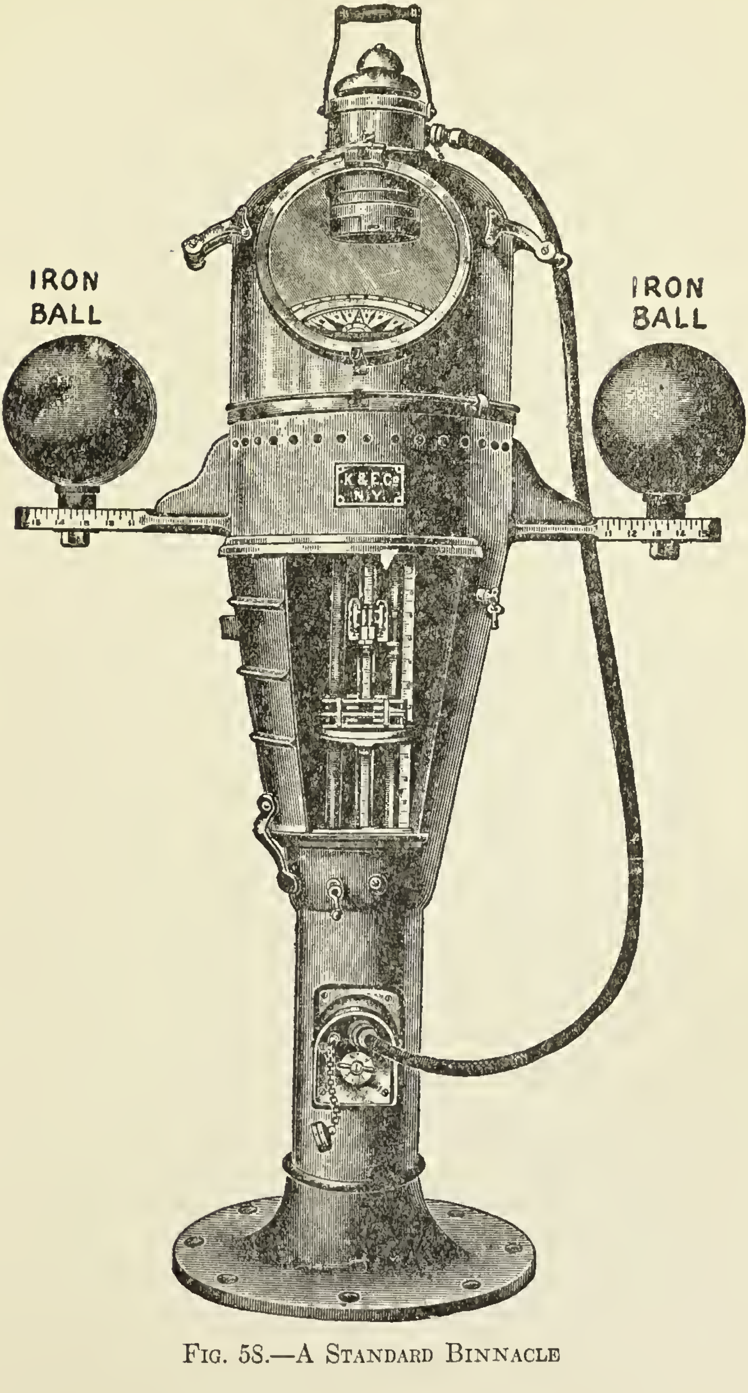


Fig. 58.—A Standard Binnacle

as it does in the latter, the needle and the card are fastened together and, consequently, both of them turn together.

The card of a mariner's compass is made of a circular sheet of mica and it and the needle are pivoted on an *agate bearing*, or mounted so that it will float in a bowl of mercury, as shown in Fig. 57, while the whole system is mounted in a pair of *gimbals*, so that the compass is free to swing in any direction, and this keeps it always level. The compass sets in a brass housing called a *binnacle*, and all of which is shown in Fig. 58.

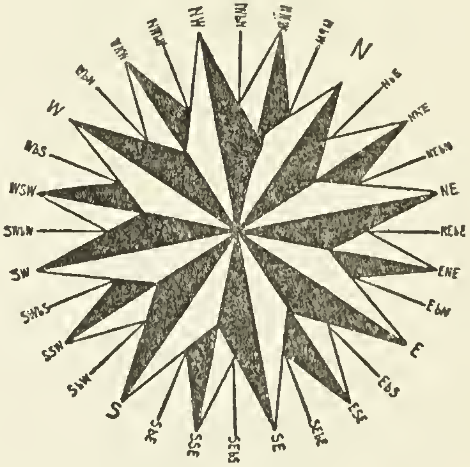


Fig. 59.—Boxing the Compass

On the card is painted a star with thirty-two rays, or *rhumbs*, as they are called, and the four main rhumbs are marked *north*, *south*, *east* and *west*, and these are termed the *cardinal points*. To name all of the points clear around the compass is known as *boxing the compass* (see Fig. 59), and these are given in the following table:

Boxing the Compass

N	North
NbE	North by East
NNE	North, North East
NEbN	North East by North
NE	North East
NEbE	North East by East
ENE	East North East
EbN	East by North
E	East
EbS	East by South
ESE	East, South East
SEbE	South East by East
SE	South East
SEbS	South East by South
SSE	South, South East
S	South
SbW	South by West
SSW	South, South West
SWbS	South West by South
SW	South West
SWbW	South West by West
WSW	West, South West
WbS	West by South
W	West
WbN	West by North
WNW	West, North West
NWbW	North West by West
NW	North West
NWbN	North West by North
NNW	North, North West
NbW	North by West
N	North

On the inside of the bowl of the compass and above the card is a mark called the *lubber line,* and it is from this that the readings of the card are made. The compass is set up so that the lubber line points toward the ship's bow, and it and the pivot on which the card is mounted are in a line with the keel. While a compass needle is supposed to point steadfastly to the north magnetic pole, it is as full of errors as a sieve is full of holes, and for this reason it is impossible to steer a true course by the compass alone for any great length of time.

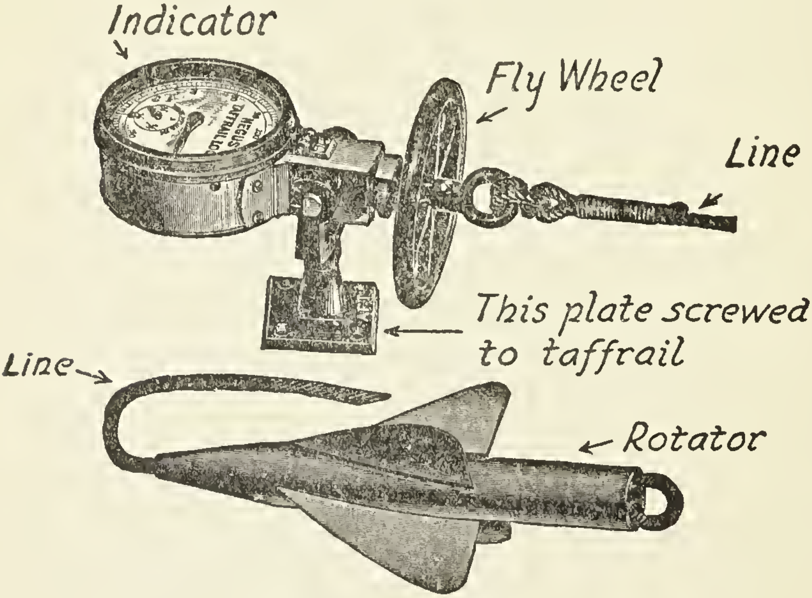


FIG. 60.—THE PATENT LOG

What Dead Reckoning Means.—When fog and clouds hide the sun, moon and stars for days at a time and prevent observations from being made of them, the ship is sailed by what is called, in the language of the sea, *dead reckoning*. To sail a ship by dead reckoning means that she is held to her course as nearly as is possible by the compass, and to find the distance she has run each day an apparatus called a *log* is used. Since neither the compass nor the log is to be relied on, dead reckoning is only used by the navigator to find the *apparent* position of the ship, except when observations with the sextant can't be made, and then it is the only way that can be used.

I have described the compass, and now a word about the log. In the early days of sailing craft, the speed of a ship was guessed at by throwing a chip overboard at the bow, the mariner walking aft and keeping even with it as it floated by. The next scheme was to tie a line of known length to a block of wood, toss it overboard, and let the line run out with it, and by timing it the speed of the ship could be roughly told.

The *patent log,* as it is called, is shown in Fig. 60, and is the kind now used to learn the speed of a ship; it is formed of a *screw* made like a little propeller, and this is fastened to a long tow line which turns with the screw; this works a recording device that is fastened to the rail and which indicates the speed the ship is running at. In fee simple, it is a speed indicator. But, with all of the improvements made in the log, the navigator of a ship does not put any too much confidence in it, and he uses it only to keep a check in a general way on the ship's position and when he cannot use his sextant.

About the Nautical Almanac.—A *Nautical Almanac* is the book that mariners swear by, for without it their observations would be of but little use. Now, there are two chief nautical almanacs published, and the oldest of these is the *British Nautical Almanac,* and this is published every year by the British Admiralty, London, and the *American Ephemeris and Nautical Almanac,* prepared by the astronomers of the Naval

Observatory at Washington and published by the Bureau of Equipment.

These almanacs give in tabulated form the positions of the sun, moon, planets and fixed stars, and by comparing the positions of these heavenly bodies with the positions of them which he observes at sea, the navigator can easily find the latitude and longitude of his ship with an accuracy that cannot be had in any other way, and which is close enough for all sailing purposes. All that you need to do to sail a ship on any of the seven seas and to any quarter of the globe is a sextant, a chronometer rated to the exact time at the prime meridian at Greenwich, and a nautical almanac.

Taking On and Dropping the Pilot.—When you sail on an ocean liner from a port, or when you are making port, the navigating officer turns the ship over to a *pilot*. He is not in any way connected with the personnel of the ship's crew, but is licensed by his respective government to conduct ships into and out of port for a fixed fee.

The reason a pilot is needed is because he knows where the channel is deep, he knows all of the hidden dangers in the harbour, and he knows better than any officer aboard the ship—because this is his sole business—how to pilot her safely in and out of treacherous waters. To be sure, he has a chart, and this shows in minute detail everything on the shore, such as lighthouses, windmills, trees and rocks, and everything that floats, such as lightships, buoys, etc., that can serve him as a bearing, and the direction and velocity of the tidal currents. But, even then, it's a ticklish job for anyone but an experienced pilot to take a big ship from her pier in the East or North Rivers to Ambrose Light, or the other way about. The pilot goes aboard at the pier if the ship is outward bound, and he is dropped off and taken back by a tug, unless there is an incoming ship that he must pilot back, and then he is taken on at sea. He and the doctor of the port are usually taken on and dropped off at quarantine.

How to Change Degrees into Miles.—Mercator's charts, which are used by navigators to set the course of a ship, are marked off into parallel meridians of latitude and lines of longitude, and these are, as I have previously explained, divided into degrees. Now, while a *statute* or *land* mile is only five thousand two hundred and eighty feet in length, a *nautical* or *sea mile* is six thousand and eighty feet. Anywhere north or south of the equator one degree is always equal to sixty sea miles, or seventy land miles. But to change a degree of *longitude,* that is the distance east or west of Greenwich, into miles is quite another thing, for the distance varies from seventy miles for each degree at the equator to zero miles at the poles. The number of *knots,* or sea miles, for each degree of longitude is given in the following table for every five degrees of latitude:

TABLE FOR CONVERTING DEGREES OF LONGITUDE INTO SEA MILES

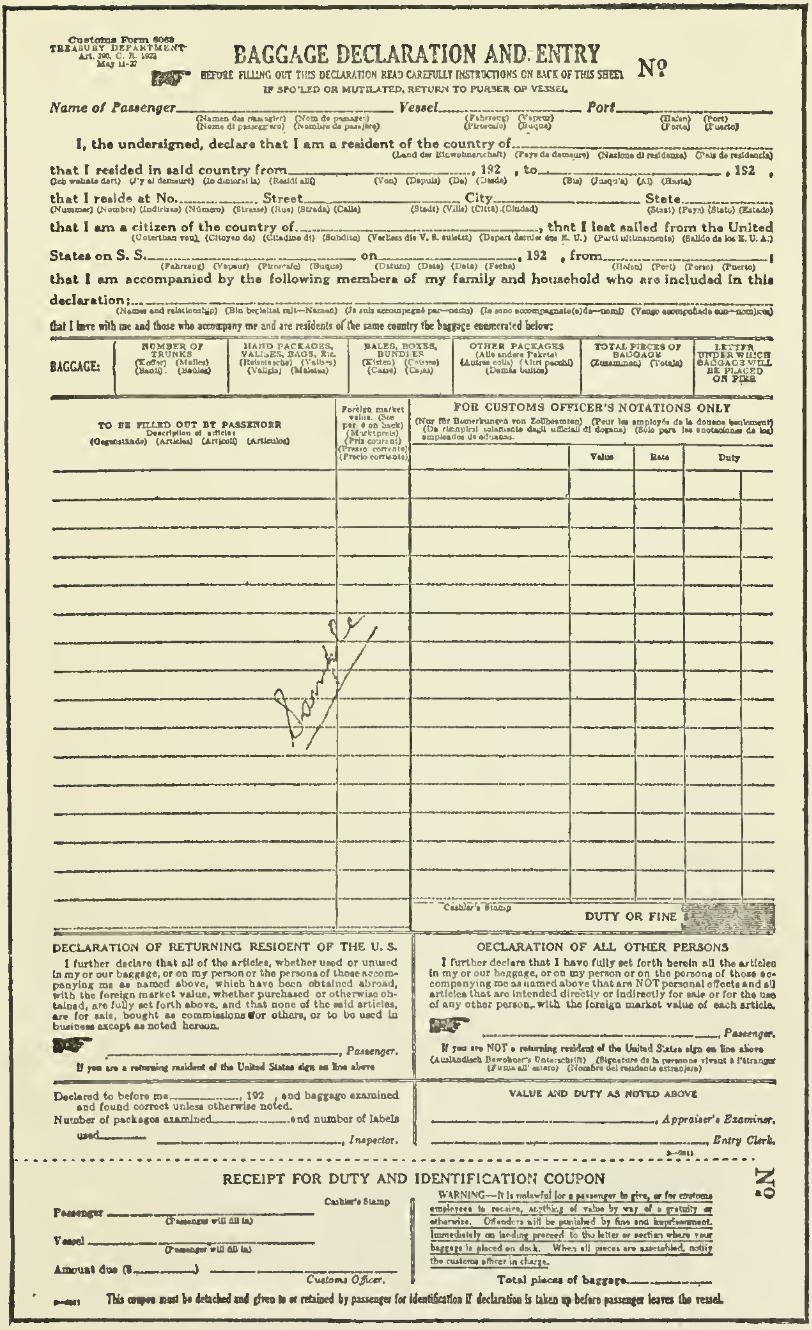
0° at the Equator	70	Sea Miles	50°	40	Sea Miles
5°	69	“ “	55°	35	“ “
10°	67	“ “	60°	30	“ “
15°	65	“ “	65°	25	“ “
20°	63	“ “	70°	20	“ “
25°	60	“ “	75°	15	“ “
30°	56	“ “	80°	10	“ “
35°	52	“ “	85°	5	“ “
40°	48	“ “	90° at the Poles	0	“ “
45°	44	“ “			

VII

IN FOREIGN LANDS

THE usual routine that you have to go through with before you land is about the same in all countries. The first thing you have to do is to fill out a card, giving about the same information that your passport does. Then you are looked at or questioned by a Government doctor, who boards the ship at quarantine, and if he is satisfied that you are sound in body and in a fairly normal state of mind he will pass you on. The health officers are not nearly as particular about these little things over there as they are over here. Then you must fill out your customs declaration slip (see Fig. 61) and, finally, your passport is scrutinized and, if all is satisfactory, and they usually are, you are given a card which will allow you to disembark when the ship docks.

Going Ashore.—The way you go ashore depends chiefly on the kind of a harbor the port has where the ship comes in. Some harbors are deep and the largest liners can steam right alongside of the dock or pier, while others are so shallow she will have to lay to just inside of it, and a little steamer, called a *tender* or *lighter,* has to come alongside and is made fast to her. Then the seamen swing a gang-plank from the ship to the lighter's deck and the passengers, the baggage and mail-sacks are transferred to her and she takes them to the dock, pier, or stage.



Customs Form 6059
TREASURY DEPARTMENT
Art. 390, C. R. 1923
May 11-23

BAGGAGE DECLARATION AND ENTRY

No.

BEFORE FILLING OUT THIS DECLARATION READ CAREFULLY INSTRUCTIONS ON BACK OF THIS SHEET
IF SPOILED OR MUTILATED, RETURN TO PURSER OF VESSEL

*Name of Passenger*__________ *Vessel*__________ *Port*__________
(Namen des Passagier) (Nom de passager) (Nome di passeggiero) (Nombre de pasajero) (Fahrzeug) (Vapeur) (Piroscafo) (Buque) (Hafen) (Port) (Porto) (Puerto)

I, the undersigned, declare that I am a resident of the country of__________
(Land der Einwohnerschaft) (Pays de demeure) (Nazione di residenza) (País de residencia)

that I resided in said country from__________, 192 , to__________, 192 ,
(Ich wohnte dort) (J'y ai demeuré) (Io dimorai là) (Residí allí) (Von) (Depuis) (Da) (Desde) (Bis) (Jusqu'à) (Al) (Hasta)

that I reside at No._____ Street__________ City__________ State__________
(Nummer) (Nombre) (Indirizzo) (Número) (Strasse) (Rue) (Strada) (Calle) (Stadt) (Ville) (Città) (Ciudad) (Staat) (Pays) (Stato) (Estado)

that I am a citizen of the country of__________, that I last sailed from the United
(Unterthan von) (Citoyen de) (Cittadino di) (Súbdito) (Verliess die V. S. zuletzt) (Départ dernier des E. U.) (Partì ultimamente) (Salido de los E. U. A.)

States on S. S.__________ on__________, 192 , from__________;
(Fahrzeug) (Vapeur) (Piroscafo) (Buque) (Datum) (Date) (Data) (Fecha) (Hafen) (Port) (Porto) (Puerto)

that I am accompanied by the following members of my family and household who are included in this declaration:__________
(Names and relationship) (Bin begleitet mit—Namen) (Je suis accompagné par—noms) (Io sono accompagnato(a) da—nomi) (Vengo acompañado con—nombres)

that I have with me and those who accompany me and are residents of the same country the baggage enumerated below:

BAGGAGE:	NUMBER OF TRUNKS (Koffer) (Malles) (Bauli) (Baúles)	HAND PACKAGES, VALISES, BAGS, Etc. (Reisetasche) (Valises) (Valigia) (Maletas)	BALES, BOXES, BUNDLES (Kisten) (Caisses) (Casse) (Cajas)	OTHER PACKAGES (Alle andere Pakete) (Autres colis) (Altri pacchi) (Demás bultos)	TOTAL PIECES OF BAGGAGE (Zusammen) (Totale)	LETTER UNDER WHICH BAGGAGE WILL BE PLACED ON PIER

TO BE FILLED OUT BY PASSENGER Description of articles (Gegenstände) (Articles) (Articoli) (Artículos)	Foreign market value. (See par. 4 on back) (Marktpreis) (Prix courant) (Prezzo corrente) (Precio corriente)	FOR CUSTOMS OFFICER'S NOTATIONS ONLY (Nur für Bemerkungen von Zollbeamten) (Pour les employés de la douane seulement) (De riempirsi solamente dagli ufficiali di dogana) (Sólo para las anotaciones de los empleados de aduanas)	Value	Rate	Duty	

Sample

Cashier's Stamp

DUTY OR FINE $

DECLARATION OF RETURNING RESIDENT OF THE U. S.

I further declare that all of the articles, whether used or unused in my or our baggage, or on my person or the persons of those accompanying me as named above, which have been obtained abroad, with the foreign market value, whether purchased or otherwise obtained, are fully set forth above, and that none of the said articles, are for sale, bought as commissions for others, or to be used in business except as noted hereon.

__________, *Passenger.*

If you are a returning resident of the United States sign on line above

DECLARATION OF ALL OTHER PERSONS

I further declare that I have fully set forth herein all the articles in my or our baggage, or on my person or on the persons of those accompanying me as named above that are NOT personal effects and all articles that are intended directly or indirectly for sale or for the use of any other person, with the foreign market value of each article.

__________, *Passenger.*

If you are NOT a returning resident of the United States sign on line above
(Ausländisch Bewohner's Unterschrift) (Signature de la personne vivant à l'étranger) (Firma all' estero) (Nombre del residente extranjero)

Declared to before me__________, 192 , and baggage examined and found correct unless otherwise noted.
Number of packages examined__________and number of labels used_____ __________, *Inspector.*

VALUE AND DUTY AS NOTED ABOVE

__________, *Appraiser's Examiner.*
__________, *Entry Clerk.*

3—2015

RECEIPT FOR DUTY AND IDENTIFICATION COUPON

No.

Cashier's Stamp

Passenger __________ (Passenger will fill in)
Vessel __________ (Passenger will fill in)
Amount due ($_____) __________ *Customs Officer.*

WARNING—It is unlawful for a passenger to give, or for customs employees to receive, anything of value by way of a gratuity or otherwise. Offenders will be punished by fine and imprisonment. Immediately on landing proceed to the letter or section where your baggage is placed on dock. When all pieces are assembled, notify the customs officer in charge.

Total pieces of baggage__________

3—2015 This coupon must be detached and given to or retained by passenger for identification if declaration is taken up before passenger leaves the vessel.

FIG. 61.—DECLARATION FORM SHOWING DUTIABLE GOODS

Meet the Customs Inspector.—Before you reach the port where you are to disembark you will have to *declare* whatever dutiable goods you have with you, if any. The way this is done is simple: Your room steward will give you a blank form with the names of all dutiable goods printed on it (see Fig. 61), and all you have to do is to fill it out and give it back to him.

Soon after you land you will find all of the baggage laid out or piled up on the dock, or pier, and it is up to you to locate all of the pieces that belong to you and have a porter get them together for inspection by one of the customs men. In foreign ports long, low tables are provided for the suitcases and trunks, but in the United States ports the floor is good enough. The customs inspector will tell you what ones he wants you to open so that he can look into them and see with his own *deadlights* that you haven't forgotten to declare anything on which you should pay duty.

When these little pleasantries are over with, the customs inspector will paste a sticker, that is, a paper label, on each piece of your baggage to show that it has been duly examined, and then you can lock the open ones up and say that you are safely landed. Turn your baggage over to a porter and he will put you and it on a special train that is waiting hard by to take you to London, Paris, or other inland cities you are going to.

A Drop in Cab Fares.—On arriving at the station of your destination you will find plenty of porters, one of whom will look after you and your belongings. Have him take you to a taxi and, if you are in a country the language of which you do not speak, all you need to do is to tell him the name of the hotel you are going to stop at, or, better, give him a card with the name written on it. He will communicate it to the driver, who will forthwith drive you there without more ado. When he sets you down your heart will go pitty-pat, for the rates, or *tariff,* as it is called in England and on the Continent, are quite low—that is, compared with those prevailing in New York and other large cities in the United States.

And you will find that tipping those who serve you will be a real pleasure—at first—for these need be only about half as much as you have been accustomed to disbursing in the United States of America, but you will quickly find that you will have to tip about six times as many of those who serve and also wait, as you do over here, and you will get mighty tired of it at last.

The prevailing rule in Europe is for the hotels to add ten per cent of the amount of your bill to it, and this is divided among the servants, and you are not supposed to have to tip any one of them individually, but you will find that all who have served you, besides quite a few who have not, will be right on hand to *get theirs* when you are checking out.

'Ware the Short-change Man.—The tips you are obliged to give and the amounts you are short-changed out of may amount to a tidy percentage of your total expenses. In the vernacular, to be *short-changed* means amounts, usually small ones, that you are cheated out of if you are not expert in figuring up what you have to pay and what you should get back in change.

You may have reason to conclude somewhere in your travels that the United States is the only honest country on earth, but that is only because you can think in the coin of the realm back home, and to keep from cheating yourself, and other people from cheating you, you must learn to do this wherever you go. A foreigner is just as apt to be short-changed in the land of the free and the home of the bootlegger as you are to be short-changed over there.

In Merrie England.—Ports of Call.—Nearly all of the liners that ply the northern routes of the Atlantic have ports of call at Plymouth, England, and Cherbourg, France. Some call at Cobh (formerly Queenstown), Ireland, and Liverpool, England, while a few run to London direct, but the docks are so far away from the city proper, a train is provided to take the passengers there. Liverpool used to be the chief port of England for big ships, but Southampton has superseded it because it is considerably nearer to London, and so saves several hours.

Where to Stay.—In Lunnon you are supposed to breakfast where you have your room, be it in a big hotel or a private house. In fact, it is hard to find a restaurant open before nine o'clock where it is possible to get breakfast. Recently, however, the *Piccadilly*[1] and *Strand Corner* Houses introduced the innovation of keeping open all night. But don't expect to get service anywhere after twelve midnight, for all other restaurants close and the busses stop running at that hour. If you want something cheaper than a second-class hotel you can find plenty of boarding houses (residential hotels, they call them over there), and rooming houses in the Russell Square district. It is near the British Museum and very convenient to Piccadilly Circus and Trafalgar Square.

About Train Service.—While the trains in England look like toys, when compared to those of the United States, they are just as fast and smooth riding. Different from our passenger cars, the carriages, as the cars are called over there, are divided up into compartments with doors opening on the sides instead of at the ends. The seats, which hold six or eight persons, face each other, so that half of the passengers must ride with their backs toward the engine. Through carriages usually have a corridor running along one side of them. The Royal Scot is a famous train from London to the north.

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[1] This restaurant has four floors, and each floor will seat one thousand people at one time. The prices are quite moderate.

There are two classes of coaches, and these are known as *first-class* and *third-class.* There was a time when there were three classes, but the second class was done away with, and what is now called *third-class* is really *second-class.* About the only difference between a first- and a third-class coach is in the colour of the upholstery and the passengers who patronize them. Berths in sleeping-coaches cost more than they do here, and in order to book a berth you must have a first-class ticket.

You can check one hundred pounds of baggage on a first-class ticket and sixty pounds on a second-class ticket, and for anything over that weight the excess charge is high. The best way to protect your baggage is to have your name painted on it, and then to insure it, which you can do at the station when you buy your ticket. Your tip to the porter who carries your luggage is a sixpence (twelve cents) for a couple of suit-cases or a shilling (twenty-four cents) where you have a trunk.

Seeing a Show.—When you are going to a play, get the tickets at the theatre in the morning yourself and you will be more likely to get good seats and at the same time save a little. The seats in the orchestra circle of a theatre are called *stalls;* the main floor, or parquet, as we call it at home, is the *pit;* the first balcony is the *dress circle,* and then comes the *balcony* and the *gallery.* Vaudeville theatres are called *music halls.* The ushers are girls, and they charge you threepence (six cents) or sixpence (twelve cents) for a program and for showing you your seat.

In Beautiful France.—Ports of Call.—The chief port of call is Cherbourg, and nearly all steamers sailing to and from England, Holland, Germany and Baltic Sea ports call there. Havre and Bordeaux are other ports of call. As you travel between England and France you will have a choice of three routes across the channel. The shortest one is between Dover and Calais (pronounced *Cal'a*), and this is twenty-two miles; the next shortest one is between Folkstone and Boulogne (pronounced *Boo-loin'*), twenty-eight miles, while the third one is between Newmarket and Dieppe (pronounced *De-ep'*), sixty-four miles.

The Railway Stations.—There are ten railway stations in Paris, but the three chief ones are (1) the Gare St. Lazare, which is the terminus of the *Western of France* Railway, and this runs to Dieppe, Havre and Cherbourg; (2) the Gare du Nord, the terminus of the *Northern of France* Railway, which runs to Calais, Boulogne, Belgium, Germany, etc., and (3) the Gare du Lyon, the terminus of the Lyon, Paris and Mediterranean Railway, which connects these cities and these also with Switzerland, the Riviera and Italy.

Parisian Hotels.—When you reach your destination, which will undoubtedly be Paris, you will find hotels and pensiones (pronounced *pon'-se-ons*) that will suit your purse, if not always your taste. The pensiones are what we should call boarding-houses over here or residential hotels in England. The *Continental* is a fine first-class hotel that is largely patronized by Americans. You will find numerous small hotels and pensiones in the Etoile district, that is the locality around the Arc de Triomphe, and all of them are close to the Champs-Elysées, the finest boulevard in Paris. If you will go over to the south side of the river Seine in the neighborhood of where the Boulevards Montparnasse (pronounced *Mo'-par-nas*) and Raspail (pronounced *Ras-pie'*) intersect each other you will find the artists' and students' district, and living here is much cheaper than on the north side of the river.

If you do not speak French, write the name of the hotel you are going to stop at on a card, and hand it to the taxi driver, and he will take you directly to it. On your arrival the porter will take your luggage and lead the way to the *concierge* (pronounced *con-se-awj'*), who is the doorkeeper, but who also functions as a general information bureau and, of course, he speaks English, and your worries are over.

In Sunny Italy.—Ports of Call.—The Italian steamship lines have their chief ports of call at Genoa and Naples. Several other lines have special sailings to these and other Mediterranean ports.

The Italian Hotels.—As in France, the first person you will meet at your hotel is a *conciergie,* and he will tell you any and everything in English that you may wish to know. If you intend staying several days it is better to book on the American plan. In the smaller hotels a lunch will be put up for you to take along if you are going out for the day, and this without extra charge. There is a regular tariff for tips, and it isn't very much, but by the time you have given them and a little to all of the beggars you meet you will begin to notice it. The ancient Romans did not care to talk to the common people, so they shook their heads and waved them off with a shake of their fingers, and in getting rid of beggars it works nearly as well now as it did then.

Money, Good, Bad and Indifferent.—Before Mussolini took the reins of government into his own hands there was considerable counterfeit money in Italy, but there is very little of it floating around now. Still, it is just as well to get your money changed at the banks and hotels and not at small exchanges. The Italians have the reputation of over-charging, but my personal experience with them is that in making change they are just as apt to give one too much as too little. In buying railway and other tickets, it is the better way to get them at old established tourist agencies like Thomas Cook and Son.

The Train Service.—Take the International trains (see Fig. 64), as the cars are cleaner and roomier than those of the ordinary express trains. Always get a receipt for your trunk and watch your luggage like a hawk, or it will not be there when you want it. In short, watch everything, especially your purse or pocketbook, for pickpockets are still plying their ignoble profession, and especially is this true on the electric lines running out to Frascati, Ostia, and Tivoli.

In Free Switzerland.—The best and cheapest hotels in the world are to be found in this little republic. Moreover, you can trust everybody and go wherever you will day or night with safety. In fact, the genial Switzer will actually help you to save your money. The railway fares are a little higher than in other

European countries, and there is no free baggage. Second-class is good enough for anyone except that he be a millionaire or a personage born to the purple. August is the best month for mountain climbing, and you can get your outfit right there, including a guide, whom you will find to be very trustworthy.

In Old Germany.—The North German Lloyd Line has ports of call at Plymouth, England, Cherbourg, France, and Bremenhaven, Germany. The Hamburg-American Line calls at the first two above named ports and at Hamburg, which is its home port. A lighter is used to take passengers off of the liners at Bremenhaven, but the liners that run to Hamburg dock directly at the piers.

Government Train Service.—There are four different classes of passenger coaches, or *waggons,* as they are called over there. Those of the first-class are upholstered in red; those of the second-class are done in grey; those of the third-class have no upholstering, while those of the fourth-class are the crudest things imaginable and are used by workmen.

The best and fastest trains are known as the well known *Luxus* expresses, and these carry first-class passengers only and run twice a week from Leningrad, Russia, through Berlin and on to Paris. Other express trains run from Berlin to Paris, and these carry *corridor coaches,* that is, coaches that have passageways or aisles through them, so that it is possible to go from one coach to another. Each sleeper, or *waggon-lits* (pronounced *vagon-le*) has a conductor who serves you with hot water and shines your shoes. It's enough to make a Pullman porter turn white in the face.

Hotels Unter-den-Linden.—The term, *Unter-den-Linden,* means *under the lindens,* that is, lime trees.

Unter-den-Linden is one of Berlin's finest streets, and is so called because it has linden trees on both sides and in the middle of it, and the best hotels are located on it. You do not register when you take a room, but after you are in it a waiter will knock on the door, hand you a printed form, which you will fill in with your name, age, nationality, residence and other information concerning your young life, and the hotel turns this thumb-nail *Who's Who* of yourself over to the *Prefect of Police.*

To make up for this seeming bit of impertinence, the room-maid lays out your pajamas, turns down the covers of your bed, and all but tucks you in it. There are numerous good, medium-priced restaurants in Berlin, and they are all interesting, too. If, when you speak to a waiter, you will call him *ober,* which in German is short for *head-waiter,* he will greatly appreciate the courtesy and give you the best service he can.

Groschkes and Taxicabs.—You can always tell a driver of a groschke by two things, and these are (1) the cast-iron looking pot-hat he wears and (2) because he is always sitting on the seat of his vehicle. A *groschke* is simply a four-wheeled horse-drawn cab, but for a very little more you can get a taxicab. If you want to ride around simply to see the sights, then the slow-moving groschke is the best, but if you are going somewhere in a hurry, then it's a taxi you want.

A Few Other Things En Bloc.—The policemen on the main street crossings are supposed to speak three languages. Silk hats, gloves and canes are always in vogue, and you will occasionally see a posure with a *wind-shield,* i. e., a monocle, in his eye. Full evening dress is seldom seen in the theatres now, a tuxedo

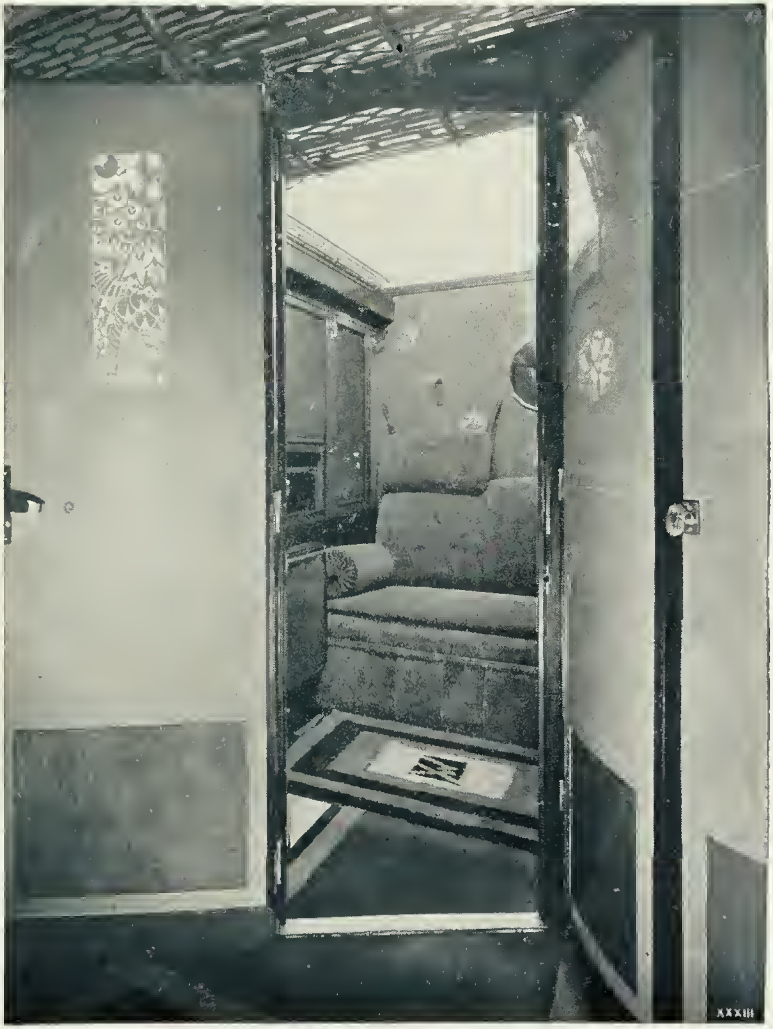

FIG. 64 THE INTERNATIONAL SLEEPING CAR.

being considered stylish enough. Theatre programs are free.

Two or more spun-brass plates, hung up like the balls of a pawnshop, indicate that the place is a barber shop. It is permissible to tip the conductor of a street-car a couple of *pfennigs*,[2] and he will be not at all offended. Don't try to transact business with a bank between twelve noon and two in the afternoon, as everybody takes two hours off for lunch.

In Darkest Russia.—The Russian-American Line is the only direct line from New York to Russia, and the ports are Riga, Leningrad and Archangel.

Hotels and Passports.—When you reach your hotel you not only have to register, but you must hand the porter your passport, and he will send it to district police station for examination. Again, before you leave the hotel you must give the porter enough time to get your passport *viséd*, that is, let the police officials stamp it. Should you want to leave the country, you must get a special supplemental permit attached to your passport, and unless you have this the officials will not let you pass the *frontier*, and you will have plenty of trouble.

Broad-gauged Railways.—The International trains are good, but all of the others are slow and seldom on time. The cars are wider than the cars over here, and they are built more along the line of our day-coaches, that is, they are not partitioned off into compartments, while the seats are made long enough so that one may lie down at full length. The cars are seldom clean and the visibility and ventilation poor. While travelling in Russia is not so good, your baggage is carried free, and that is about the only free thing you'll find there.

---

[2] A *pfennig* is about one-half a cent.

Tea and vodka are the national drinks. Of course, you know what tea is, and I'll explain that *vodka* is a Russian word that means *little water.* It is a distilled alcoholic liquor usually made from rye, but when this is scarce it is made from potatoes. It is a terrible drink and has the *fire-water* of our forefathers outdistanced in its effects by a mile.

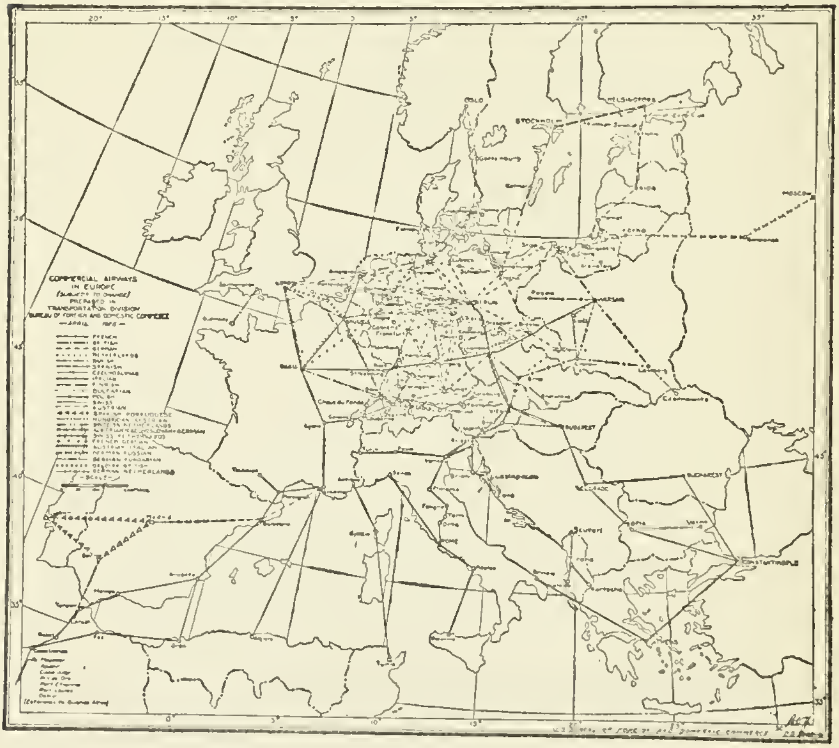

Fig. 65.—Air Routes in Europe

Every express coach has a large urn, called a *samover,* in which there is hot water all of the time. The conductor gives each passenger a little tea-pot so that he can make himself a cup of tea every now and then to while away the gloom of a long ride.

Cabs and Other Things.—There are still horse-drawn cabs in Russia called *droshkis* (pronounced *drus'-kis*), and these are long, four-wheeled, open carriages. In Leningrad and Moscow taxicabs predominate, but as you get into the interior towns the latter are few and far between, and the droshkis still reign supreme. It is very hard to get along in Russia with English alone, and very few foreigners, especially of the Hebraic persuasion, travel there for pleasure.

The Airplane Routes of Europe.—In England, France, Italy and Germany regular airplane service is in operation, and the lines run from London to Paris, to Berlin, to Rome, to Constantinople, to Malmö, Sweden, to Casablanca, Morocco, and to Cairo, Egypt. The following table gives the approximate time and the cost of fares from London to the chief European cities:

	Approximate Time.	*Approximate Fare One Way.*
London to Amsterdam	4½ hours	$20.00
Basle	7½ "	40.00
Berlin	10½ "	38.50
Bremen	7 "	28.00
Brussels	3½ "	20.00
Cologne	5¾ "	26.75
Copenhagen	11½ "	45.50
Frankfort	7¼ "	29.25
Hamburg	8 "	32.00
Hanover	7½ "	28.00
Magdeburg	9½ "	37.50
Malmö	10 "	48.75
Munich	11 "	39.75
Ostend	2½ "	16.00
Paris	3¼ "	23.75
Zurich	8½ "	35.75

A map of the various air routes is given in Fig. 66.

VIII

SOME USEFUL INFORMATION

ALL through this book I have told you how to travel first-class, by water and rail, and at the minimum it costs much money. But there is a very much cheaper way to go overseas and to see the sights of various countries, and this is to travel second- or third-class. Many of our best people, by which I mean refined, educated people, travel second-class and occasionally you will find them travelling third-class, and this can be done without losing caste if you go about it the right way.

Travelling Second and Third Cabin.—In the foregoing pages I have assumed that you are travelling first cabin on a first-class boat, and this is a very expensive way to see Europe. About the cheapest that you can book a first cabin passage for from New York or Boston to Europe is two hundred and fifty dollars, while a second cabin passage will cost you one hundred and fifty dollars, and a third cabin passage will be one hundred dollars. Now, don't get *third cabin* passage mixed up in your mind with *third-class* or *steerage* passage, for they are as different as day and night.

Nearly all of the big ships carry all of the above four classes and all of them are kept entirely separate and distinct from one another. This being so, there are many people who would rather stay at home, and in time past have done so, than to go second or third cabin simply because those of the first cabin have the best of everything, including the run of the boat, by which I mean that they can go wherever they like. Oppositely disposed, the second and third cabin passengers are restricted to a particular part of it. The result of this necessary discrimination was that many people of pride would not go overseas at all, and so the steamship companies soon found that they were losing money.

To still maintain the high prices charged for first cabin passage and to satisfy the pride of those who would have to travel second or third cabin, some of the companies put on what are called *cabin boats,* and these carry second and third cabin passengers only. Thus, if you go on a second cabin boat, there will be no other class of passengers on it, if we except those in the steerage who do not count, and if you go on a third cabin boat there will likewise be no other class of passengers on it; and all of this means that while you are listed as a second or a third cabin passenger you are really travelling first-class in so far as the ship you are sailing on is concerned.

The only other differences in going on a second or third cabin boat and on a first cabin one are those of name and speed. Thus, it sounds considerably higher-toned to say you are sailing on the *Majestic* or the *Olympic* than it does to say on the *Pittsburgh* or the *Minnekada.* If time is a factor, then you should by all means take one of the big ships, for they make the crossing in five or six days, whereas a second or third cabin boat makes it in ten or eleven days.

While, of course, second and third cabin boats are nowhere nearly as large as the first cabin boats, still the first named are nicely furnished throughout, the service is very good, and the food as excellent as you will find in a first-class hotel in a city of the size of New Haven, Connecticut, and the ship is large enough to be steady. The third cabin boats are meagrely furnished, the service is not so good, and the food is about as good as you will find in the average second-rate hotel here in the United States. To get a steady ship, do not take one that is less than fifteen thousand tons displacement. If you can book passage on one of twenty thousand tons you will have one that is ideal in size and for comfort.

The Monies of Foreign Countries.—By *monetary unit* is meant the standard piece of money that is used in a country. Thus in the United States the *dollar* is the monetary unit, and other money values are reckoned up and down from it.

Great Britain.—The monetary unit is the *pound* (£) and it is equal to about $4.87.

1 pound = 20 shillings = $4.87.
1 shilling (s) = 12 pence = 24 cents.
1 pence (or 1 penny) = 4 farthings = 2 cents.
1 farthing = ½ cent.

Of paper money the 1 pound note and the 10 shilling note are the smallest. The gold coins are the *sovereign* (£1) and *half-sovereign* (10s). The silver coins are the *crown* (5s); the *half-crown* (2s, 6p); the *six-pence* (6p); and the *three-pence* (3p), while the copper coins are the *penny,* the *half-penny* and the *farthing.* The *guinea* is equal to 21 shillings, and it is widely used by professional men and in various lines of business.

France.—The monetary unit is the *franc,* and it is equal to 100 *centimes.* Its *par value,* which means its *face value,* is 19.3 cents, but its present value is only about 4 cents. Very little gold or silver money is used in France, but, since the war, paper, nickle, copper and alloys are employed instead. The various coins in general use are the 5 francs, 1 franc, 25 centimes, 10 centimes and 5 centimes, or 1 sou, as the latter is called.

Italy.—The monetary unit is the *lira,* and it is equal to 100 *centisimo.* It has a par value of 19.3 cents, hence there are, approximately, 5 liras to the dollar, but at the present time the lira is worth about 5 cents. As in France, there is very little gold or silver money used, but all of the coins are made of the inferior metals. The various coins that are in general use are the 5 liras, 2 liras, and 1 lira; the 50 centisimi, 25 centisimi, 20 centisimi, 10 centisimi and 5 centisimi pieces.

Switzerland.—The monetary unit is the *franc* of 100 centimes, the par value of which is 19.3 cents.

Germany.—The monetary unit is the *gold mark,* and it has a value of 23.8 cents.

Holland.—The monetary value is the *guilder,* and the par value of this is 40⅕ cents.

Spain.—The monetary unit is the *peseta* of 100 centisimos, and its par value is 19.3 cents.

Greece.—The monetary value is the *drachma,* which has a par value of 19.3 cents.

Russia.—The monetary value is the *ruble* of 100 *kopecks,* and this is equal to about 50 cents.

Around the World in Twenty-three Days.—When Jules Verne made Phineas Fogg go round the world in eighty days people enjoyed the story and laughed at the improbability of such a thing. Today you, I or anyone can circumnavigate the earth in less time. The first globe-trotter to beat the imaginary Fogg's record was Nelly Bly, who, in 1889, circled the world for the *New York Tribune* in seventy days and ten hours.

Then, in 1890, George Francis Train lowered her record to sixty-seven days, thirteen hours, three minutes and two seconds. This record was broken by a boy named Charles C. Fitzmorris, in 1901, when he won a round-the-world race conducted by the Hearst newspapers. His time was sixty days, thirteen hours, twenty-nine minutes and forty-two and four-fifths seconds. This record was broken by Linton Wells and Edward Evans, New York newspapermen, who circled the globe in twenty-eight days, fourteen hours and thirty-six minutes.

The final record as this book goes to press was made by John Henry Mears and B. D. Collyer, who took off from the Battery, New York City, in a seaplane, on June 29, 1928, at 5 A. M., and landed at the Battery at 8:21 P. M., July 22, after making the trip around the world in twenty-three days, fifteen hours and twenty-one minutes.

They left the Battery in a seaplane which landed them at sea beside a pilot boat, that put them aboard the *Olympic,* which was at that time nearly six hours out from New York. Aboard this fast ship they had a folding-wing Fairchild monoplane, and on landing at Cherbourg they took off in their airplane and flew across Europe and Asia to Tokio, Japan. There they put their airplane on board the steamer *Empress of Russia,* and sailed for Victoria, B. C.

Arriving on American soil, they again took off in their airplane and flew across the continent, stopping at Spokane, Washington; Minneapolis, Chicago, Cleveland, and Middletown, Pa., to replenish their fuel supply. This round-the-world flying trip clipped off four days, twenty-three hours and fifteen minutes off of the best previous record. Can you lower it?

About Knots and Miles.—The *statute* or *legal land mile* is five thousand two hundred and eighty feet. The British Admiralty *nautical* (*sea*) *mile* or *knot* is six thousand and eighty feet. The *statute knot* is six thousand eighty-two and sixty-six one hundredths feet, and this is generally taken by navigators as the standard. The way the number of feet in a statute knot is found is this: The circumference of the earth is divided into three hundred and sixty degrees, and each degree contains sixty knots, or twenty-one thousand six hundred knots to the circumference (360 x 60). Now, one hundred and thirty-one million three hundred and eighty-five thousand four hundred and fifty-six feet, which is the number of feet in the earth's circumference, divided by twenty-one thousand six hundred, which is the number of knots in the earth's circumference, gives six thousand eighty-two and sixty-six one hundredths feet, or the length of one statute mile.

The Distance You Can See at Sea.—The distance at which you can see ships and other objects at sea on a clear day varies somewhat, but is roughly about as follows at the heights named:

Elevation	*Distance*	*Elevation*	*Distance*
At 5 feet........	2.9 miles	At 200 feet.......	18.8 miles
At 10 feet........	4.2 miles	At 300 feet.......	23 miles
At 20 feet........	6 miles	At 500 feet.......	30 miles
At 50 feet........	9.4 miles	At 1,000 feet.......	33.4 miles
At 100 feet........	13.3 miles	At 5,280 feet.......	96.2 miles

Position Aboard Ship.—When you look toward the *bow,* that is, the front end of the ship, the *left hand* side is called the *port side.* Looking toward the bow of the ship the *right hand side* is called the *starboard side.* To *port the helm* means to turn the ship's bow to the *starboard,* and to *starboard* the *helm* means to turn her bow to *port.*

Time, Bells and Watches Aboard Ship.—Time is kept on board ship by bells striking every half-hour. The *nautical,* or *sea, day* begins at noon and time is rung out by striking a bell with its clapper from one to eight times, as follows:

BELL TIME ABOARD SHIP

A. M.	A. M.	A. M.	*Number of Bells*	P. M.	P. M.	P. M.
12:30	4:30	8:30	1 Bell	12:30	4:30	8:30
1:00	5:00	9:00	2 Bells	1:00	5:00	9:00
1:30	5:30	9:30	3 "	1:30	5:30	9:30
2:00	6:00	10:00	4 "	2:00	6:00	10:00
2:30	6:30	10:30	5 "	2:30	6:30	10:30
3:00	7:00	11:00	6 "	3:00	7:00	11:00
3:30	7:30	11:30	7 "	3:30	7:30	11:30
4:00	8:00	Noon	8 "	4:00	8:00	Midnight

The *time* is generally divided into *seven watches* for the crew, though some ships now have only *six watches* of four hours each, the change of the watch being indicated by the bells sounding the time. The watches are as follows:

WATCHES AND BELLS

Afternoon Watch	Noon to 4 P. M.
First Dog Watch	4 P. M. to 6 P. M.
Second Dog Watch	6 P. M. to 8 P. M.
First Watch	8 P. M. to Midnight
Middle Watch	12 P. M. to 4 A. M.
Morning Watch	4 A. M. to 8 A. M.
Forenoon Watch	8 A. M. to Noon.

DIFFERENCES IN TIME BETWEEN NEW YORK AND SOME OF THE WORLD'S GREAT CITIES

Antwerp	5 hours 14 minutes later than New York
Berlin	5 hours 50 minutes later than New York
Bremen	5 hours 31 minutes later than New York
Brussels	5 hours 13 minutes later than New York
Buenos Aires	1 hour 2 minutes later than New York
Calcutta	11 hours 49 minutes later than New York
Constantinople	6 hours 52 minutes later than New York
Dublin	4 hours 31 minutes later than New York
Edinburgh	4 hours 43 minutes later than New York
Geneva	5 hours 21 minutes later than New York
Hamburg	5 hours 36 minutes later than New York
Havana	34 minutes earlier than New York
Hongkong	11 hours 27 minutes earlier than New York
Liverpool	4 hours 44 minutes earlier than New York
London	4 hours 56 minutes earlier than New York
Madrid	4 hours 41 minutes earlier than New York
Melbourne	9 hours 24 minutes earlier than New York
Mexico City	1 hour 41 minutes earlier than New York
Panama	22 minutes earlier than New York
Paris	5 hours 55 minutes later than New York
Rio de Janeiro	2 hours 3 minutes later than New York
Rome	5 hours 46 minutes later than New York
Leningrad	6 hours 57 minutes later than New York
Valparaiso	9 minutes later than New York
Vienna	6 hours 1 minute later than New York
Yokohama	9 hours 46 minutes earlier than New York

MILEAGE BETWEEN PORTS AROUND THE WORLD

Cities	*Miles*
New York to London	3,325
New York to Liverpool	3,016
New York to Southampton	3,086
New York to San Francisco	3,270
San Francisco to Honolulu	2,080
Honolulu to Yokohama	3,440
San Francisco direct to Yokohama	4,700
Yokohama to Hongkong	1,620

Yokohama via Inland Sea to Hongkong	1,190
Manila to Hongkong	642
Manila to Nagasaki	1,329
Shanghai to Hongkong	810
Hongkong to Colombo	3,096
Colombo to Calcutta	1,264
Colombo to Bombay	875
Colombo to Port Said	3,488
Bombay to Port Said	3,059
Port Said to Brindisi	930
Port Said to London	3,115
London to New York	3,325

And you're home again.

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